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Organizational Design in the Enterprise Development Process

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PREFACE

In today's volatile business environment, organizational design presents a serious challenge to any manager, whether of a multinational corporation or a small team. To work effectively, managers must have a clear understanding of organizational structure. The structure defines the framework for the operation of an organization both through defining the place of each member (in terms of division of work, tasks, and duties) and through determining their desired conduct and behaviour (patterns of impersonal formal relations, hierarchical communication, and norms of conduct based on relations). Consequently, organizational structure has a crucial control function minimizing the amount of randomness and unpredictability of organizational behaviour. At the same time, it is affected by many factors and circumstances which influence its form and shape. These factors are both external (company environment) and internal (human resources, organizational culture, technology, and company size). Another vital factor determining organizational structure is company strategy.

Organizational structure is the result of business practice as well as the implementation of concepts created by the study of organization and management. Views on organizational structure have undergone evolution and have moved from hierarchical and vertical structures towards organic concepts which, to an ever increasing degree, take into consideration heterarchy and horizontal structures.

The main aim of this monograph is the issue of organizational structures and the principles of their design in the process of company development. The design of organization used to be and is one of the most important challenges for those who manage companies regardless of company size, legal form, or specificity of its operation. Efficient operating of a company requires an appropriate organizational structure matching other solutions adopted and corresponding to the stage of the company's development.

In the monograph, the reader will find a discussion of selected issues of organizational structure design, particularly in the context of selected strategies of company development.

The book consists of 4 parts. The **first part** presents basic information on organizational structures, that is, the concept, elements, and functions of company organizational structure and the factors affecting the form of organizational solutions. Particular attention is paid to the development of a company as a determinant of its organizational structure.

In the **second part,** the procedure of designing an organization is discussed. Basic context features of organizational structure like specialization, configuration, centralization, coordination, formalization, and others, which often constitute a designing dilemma, are presented here.

The **third part** is devoted to the typology of company organizational structures. Traditional (hierarchical) organizational structures, contemporary as well as modern and future forms of organization are discussed here.

The **fourth part** presents results from a study on designing and changing organizational structures in Polish companies in the context of selected development strategies. Separate sections are devoted to the features of organizational structures of companies which implement strategies of specialization, diversification, and restructuring. The study presented in this part was conducted at the Management Department of the Technical University of Łódź in the years 2001-2006. The research comprises the following three research projects:

- "Features and Effects of Organizational and Employment Restructuring on the Example of Large Enterprises" – a project conducted with a sample of 65 large Polish enterprises between 2001 and 2002;
- "Organizational Restructuring of Industrial Enterprises in the Łódź Region" – a project conducted with a sample of 27 large enterprises in Łódź in 2003;
- "The Influence of Strategy on Company Organization" – a project conducted with a sample of 79 large Polish enterprises in 2006.

The research tool employed comprised postal and telephone polls supported by an Internet questionnaire in the first project. The respondents included the representatives of top management or persons appointed by them.

The book is intended for managers and specialists responsible for organizational and development activities in companies as well as for scholars and students conducting research on organizational design in company development conditions.

The author expresses her gratitude to all who have contributed to the publishing of this book and at the same time, accepts responsibility for all of its flaws and deficiencies.

Agnieszka Zakrzewska - Bielawska

1. FUNDAMENTALS OF ORGANIZATIONAL STRUCTURE

1.1. Notion of Organizational Structure

According to Harold J. Leavitt, organizational structure is inextricably linked to technology and people who perform particular tasks. Charles Handy[1] has shown that it is also directly linked to corporate culture. Organizational structure is the form of an organization that is evident in the way divisions, departments, functions, and people are linked together and interact. It reveals vertical operational responsibilities and horizontal linkages and may be represented by an organization chart. But organizational structure is not a notion that is easily interpreted in an unambiguous manner. There are many definitions of company organizational structure in the literature. The vagueness and lack of uniformity in understanding this term results, first of all, from the internal complexity of the notion of organizational structure, from objective difficulties connected with distinguishing organizational structure from the whole system and isolating it from the variously defined sub-systems of a company, and from a multiplicity of assumptions and research attitudes adopted by authors trying to define this notion.[2]

Some authors treat the structure of an organization as a method of linking its elements into a whole, taking into account the common goal and environmental conditions.[3] According to other scholars, an organizational structure means the entirety of functions and relations defining in a formalized way its mission, which should be pursued by all organizational units according to principles worked out between the particular parts of an organization[4]. Others still understand the organizational structure of a company as its division into smaller

[1] Ch. B. Handy: *Understanding Organizations*, 4th edition, Penguin Business, London 1993

[2] A. Nalepka, A. Kozina: *Podstawy badania struktury organizacyjnej*, Wydawnictwo Akademii Ekonomicznej w Krakowie, Kraków 2007, p. 12

[3] M. Przybyła: *Struktury organizacyjne przedsiębiorstw* in *„Struktury organizacyjne przedsiębiorstw i ich ugrupowań”* R. Krupski, M. Przybyła (eds.) Ossolineum, Wrocław 1996, p. 14

[4] Strategor: *Zarządzanie firmą. Strategie, struktury, decyzje, tożsamość*, PWE, Warszawa 2001, p.281

parts (departments, units) along with establishing their tasks, competences and responsibilities and defining relations between them, with the most important one being the relation of subordination[5]. When analyzing the most popular definitions of organizational structure, they may be divided into three categories, i.e.: definitions placing emphasis on the elements of a whole system and their arrangement, definitions accentuating relations occurring between the elements of a whole system, and definitions stressing both the arrangement of the elements of a whole system and relations occurring between them. Sample definitions of each category of organizational structure as formulated by some authors are presented in Table 1.1.

Table 1.1. Definition of organizational structure according to selected authors

	Author	**Definition of organizational structure**
Focus on the elements of a whole system and their arrangement	H. Mintzberg	The ways in which labour is divided into distinct tasks and coordination is achieved among these tasks.
	R.W.Griffin	A set of construction elements which may be used in shaping an organization. The result of their use in the concrete arrangement of the elements of an organization and their interrelationships.
	D. L. Nelson J.C. Quick	The linking of departments and jobs within an organization
	M. Przybyła	The method of grouping elements into a whole taking into consideration the common goal and environmental conditions.
Focus on relations between the elements of a whole system	J.G. March H.A. Simon	Those aspects of the pattern of organizational behaviour which are relatively stable and undergo only certain changes.
	J.A. Pearce, R.B. Robinson, Jr.	A formalized arrangement of interactions between and responsibility for the tasks, people, and resources in an organization.
	Strategor	All the functions and relations describing in a formalized way the mission which each organizational unit should fulfil and principles of cooperation between particular parts of an organization.
	J. Zieleniewski	All the relations between the parts of a whole system and between individual parts and the whole system, which are significant from the point of view of its organization.

[5] S. Sudoł: *Przedsiębiorstwo. Podstawy nauki o przedsiębiorstwie. Teorie i praktyka zarządzania*, TONiK „Dom Organizatora", Toruń 2002, p. 221

Focus on the arrangement of the elements of a whole system as well as on relations between them	J.A.F. Stoner E.E. Freeman D. R. Gilbert Jr.	It is a framework that managers devise for dividing and coordinating the activities of members of an organization
	G.A. Cole	An intangible web of relationships between people, their shared purposes, and the tasks they set themselves to achieve those purposes.
	S. Sudoł	Division into respectively smaller parts (departments and units) along with setting their tasks, competence and responsibility and setting relations and connections between them.

Source: based on H. Mintzberg*: Structure in Fives: Designing Effective Organizations*, Prentice Hall, Englewood Cliffs 1993, R.W. Griffin R.W.: *Management*, 4th edition, Houghton Mifflin Company, Boston 1993; D.L. Nelson, J.C. Quick, *Understanding Organizational Behavior. A Multimedia Approach*, South Western, Ohio 2002; M. Przybyła: *Struktury organizacyjne przedsiębiorstw* in *„Struktury organizacyjne przedsiębiorstw i ich ugrupowań"* R. Krupski, M. Przybyła (eds.) Ossolineum, Wrocław 1996; J.G. March, H.A. Simon: *Organizations*, 2 edition, Wiley-Blackwell 1958; J.A. Pearce, R. B. Robinson, Jr.: *Strategic Management*, McGraw-Hill, New York 2007; Strategor: *Zarządzanie firmą. Strategie, struktury, decyzje, tożsamość*, PWE, Warszawa 2001; J. Zieleniewski: *Organizacja zespołów ludzkich*, Wydawnictwo Naukowe PWN, Warszawa1972; J.AF. Stoner, R. E. Freeman, D.R. Gilbert Jr.: *Management*, 6th edition, Prentice Hall, Englewood Cliffs, New Jersey 1995; G.A. Cole, *Organizational Behavior*, DP Publications, 1995; S. Sudoł: *Przedsiębiorstwo. Podstawy nauki o przedsiębiorstwie. Teorie i praktyka zarządzania*, TONiK „Dom Organizatora", Toruń 2002

Despite the multitude of approaches to organizational structure, there are three key components in its definition. First, organizational structure designates formal reporting relationships, including the number of levels in the hierarchy and the span of control of managers and supervisors. Second, it identifies the grouping together of individuals into departments and departments into the whole organization. Third, it includes the design of systems to ensure effective communication, coordination, and integration of efforts across departments.[6] These three elements of structure pertain to both vertical and horizontal aspects of organizing. For example, the first two elements are the structural framework, which is the vertical hierarchy.[7] The third element pertains to the pattern of interactions among an organization's employees.[8] An ideal structure encourages employees to provide horizontal information and coordination where and when it is needed.

[6] J. Child: *Organization*, Harper & Row, New York 1984

[7] H. Willmott: The *Structuring of Organizational Structure: A Note*, Administrative Science Quarterly 26/1981, p.470

[8] R.L. Daft: *Understanding the Theory and Design of Organizations*, Thomson South- Western, United Kingdom 2007, p.190

Organizational structure may be defined in a static or dynamic way.[9] **A static approach to** organizational structure disregards the time factor, presents relations between elements at a given moment as well as their spatial arrangement. It means that organizational structure from the static perspective determines the arrangement of people and resources, work division, decision structure, coordination mechanisms, tasks, competence and responsibility, a general policy, and rules for its implementation. Such an approach to organizational structure is reflected in a graphic way as an organizational chart. Such components of organizational structure as workplaces, organizational units and management levels are easy to identify in a static presentation.

A dynamic approach to organizational structure takes into account the time factor and involves the way in which processes making up the operation and development of an organization are arranged. These processes involve: work processes, document circulation, flow of information, flow of capital resources, programmes, and plans.

There occur certain connections and relations between particular elements of an organization. All of these relations altogether are often given in the literature the common name of organizational bonds. Due to the direction of connections, organizational bonds are classified in the following way:

- **formal bonds (linear, hierarchical)** occurring in the context of the assignment of decision authority – they express formal subordination: superior – subordinate;
- **functional bonds** – occurring in the context of the diversification of professional competence. They may take place in dual form: as functional hierarchical bonds, i.e. formal bonds between functional superiors and subordinates (these give the possibility of decision making, but only within the framework of particular functions) and as functional supporting (advisory) bonds, the essence of which is to advise and give opinions without the right to take decisions;
- **technical bonds** - occurring in the context of work division; they are relations between units taking part in one technological process using the same technology (e.g. workers at an assembly line);
- **information bonds** - occurring in the context of information exchange and imposing on all members the obligation of mutual exchange of information.

Particular types of organizational bonds may overlap. Information and functional bonds are secondary in relation to official and technical bonds. The type of dominant bond in a company defines the character of its organizational structure and the manner in which it operates. At the same time, descriptions of particular bonds are included in organizational documents (statutes, schemes, instructions, organizational rules, procedures, lists of responsibilities, etc.) These jointly define order in an organization and constitute its formal organizational

[9] W. Kieżun, *Sprawne zarządzanie organizacją*, Oficyna Wydawnicza SGH, Warszawa 1997, p. 275.

structure.[10] There is also an **informal organizational structure in each organization.** It is defined as undocumented and officially unrecognized relationships between members of an organization that inevitably emerge out of the personal and group needs of employees. H.A. Simon has described it as interpersonal relationships in the organization that affect decisions within it but are either omitted from the formal scheme or are not consistent with it.[11] One of the first scholars to recognize the importance of informal structures was Chester Barnard.[12] He noted that informal relationships help organization members satisfy their social needs and get things done. He also noted that formal organizations come from informal ones, which are necessary for them to function. On the other hand, any formal organization creates, in the course of its operations, an informal organization. Therefore, one cannot exist without the other.

Another modified approach to the issue is given by M. Bielski, who analyzes the views of various authors on this subject, and distinguishes:[13]

- a formal structure which includes a record, in the form of numerous documents, of all the organizational bonds existing in an organizational structure;
- an informal structure which encompasses organizational relations which deviate from the formal organization;
- an unformalized structure which encompasses organizational relations existing within the margin of freedom that is deliberately left to members of an organization as to the way in which common goals are to be pursued. It supplements the formal structure;
- a non-formal structure understood as non-organizational relations which encompass all the individual and group behaviour resulting from discrepancy or incomplete uniformity of individual and group goals with the organization's goals. These relations simply accompany the formal structure rather than modify or supplement it.

Static and dynamic, formal and informal approaches to organizational structure are still insufficient for a full analysis of structural solutions or for designing new ones. As a result of research conducted at Aston University in Birmingham (the so-called Aston School), there arose a multi-dimensional concept, making it possible to analyze organizational structure in five dimensions: specialization, configuration, centralization/decentralization, co-ordination, and formalization.[14] These qualities are often defined as features or

[10] L.J. Mullins: *Management and Organizational Behavior*, Pitman Publishing, London 1996, p.72
[11] H.A. Simon: *Administrative Behavior*, 3rd edition, Macmillan, New York 1976, p. 270
[12] Ch. I. Barnard: *The Function of The Executive*, Cambridge Mass: Harvard University Press 1968, p. 140
[13] M. Bielski: *Organizacje. Istota, struktury, procesy*, Wydawnictwo Uniwersytetu Łódzkiego, Łódź 1997, p.173-174
[14] D.S. Pugh, D.J. Hickson: *Organizational Structure in its Context: The Aston Programme I*, Gower Publishing 1976

design dilemmas of organizational structure and will be discussed further on in the monograph.

A company's organizational structure changes in time, undergoes modifications along with its development, with the growing complexity of its organization, environment, and tasks. However, it always constitutes a factor organizing a company, reducing uncertainty, and streamlining decision processes. It also fulfils many other important functions in a company.

1.2. Functions of Organizational Structure

Organizational structure mainly plays a regulating role in a company. It minimizes arbitrariness and unpredictability of organizational behaviour through structuring elements and actions.[15] Structuring involves the reduction of the company's complexity, divides its members into various groups, and assigns a place to each member by delegating power, work, tasks, and duties. Structuring actions means defining general rules of behaviour in the organization, the institutionalization of norms of mutual conduct of individual people and groups of people having different positions and fulfilling different organizational functions.

An effective organizational structure should constitute a framework for organizational activities (executive and managerial), should take into consideration the specificity of the executive processes, and should follow from the strategy, which it should also match. Moreover, it should regulate the activities of particular employees and teams, enable reaching a defined level of realization of their needs, and secure an effective pursuit of company goals. [16]

Numerous scholars attempted to identify a set of functions which should be fulfilled by an organizational structure. A comprehensive classification of organizational structure functions elaborated on the basis of various concepts was presented in the monograph "Doskonalenie struktury organizacyjnej" edited by A. Stabryła. It distinguished seven functions of organizational structure: [17]

- **the function of a classifier of the goals of the manufacturing system** – this function involves organizing (dividing and linking) a system's goals and actions corresponding to these goals, which have been assigned to particular members of the organization. This is a prerequisite for achieving the organizational effect of cooperation and, at the same time, a condition for the realization of the goals of the manufacturing system;

[15] K. Mreła: *Struktura organizacyjna. Analiza wielowymiarowa*, PWE, Warszawa 1983, p.36
[16] A.K. Koźmiński, W. Piotrowski (ed.): *Zarządzanie. Teoria i praktyka*, Wydawnictwo Naukowe PWN, Warszawa 2004, p.307
[17] J. Dziadoń: *Podstawy badań nad strukturą organizacyjną* in *„Doskonalenie struktury organizacyjnej"* A. Stabryła (ed.), PWE, Warszawa 1991, p.17-19

- **the function of organizing the elements of the manufacturing system and creating organizational positions**; this function reflects the manner in which people, equipment, and the above-mentioned goals and actions are linked into organizational positions;
- **the function of grouping positions into organizational units** – this function leads to the division of the manufacturing system into specialized organizational segments with regard to certain fields of activity differing in terms of size, complexity, and organizational status;
- **the function of shaping functional relations** – this function involves linking organizational positions in accordance with the course of realization of the goals of the system. This function also involves operational, advisory and information relations between the above-mentioned organizational segments;
- **the function of forming hierarchical relations and creating management segments** – this function in particular involves:
  - establishing vertical relations and defining the tiers of the hierarchical structure,
  - defining managerial positions which regulate the functioning of particular organizational segments
  - completing the process of forming organizational units,
  - creating a position (sometimes a unit) fulfilling an auxiliary function if tasks related to managing a particular organizational unit exceed the possibilities of a single person; this constitutes a complex managerial segment;
- **the function of delegating decision authority and dividing the scope of responsibility** – this function determines the internal harmony of work division within the manufacturing system.
- **the function of formalizing the structure of the manufacturing system** – this function results from the essence of the formal structure and involves putting the adopted solutions in writing in appropriate organizational documents.

Consequently, one may note that organizational structure is first of all a tool for: [18]

- managing (it also constitutes a vital tool for the introduction of strategic management, knowledge management, quality, etc.);
- linking the elements of a company into an integral whole, this should lead to the internalization of employees goals with the company's goals;
- securing a relative equilibrium that stops the destructive processes resulting from the opportunistic behaviour of organization members or from behaviour aimed at the attainment of individual ambition;

[18] M. Przybyła, W. Wudarzewski, J. Koziński: *Struktura organizacyjna jako narzędzie zarządzania*, Wydawnictwo AE we Wrocławiu, Wrocław 1993, p.24; A. Nalepka: *Struktura organizacyjna*, Antykwa, Kraków 2001, p.25; M. Przybyła: *Organizacja i zarządzanie*, Wydawnictwo AE we Wrocławiu, Wrocław 2002, p. 65-66

- ensuring that activities are in sync, which is not only a tool for the coordination but also the integration of activities;
- limiting the uncertainty following from the probabilistic character of an organization which results from the changeability of conditions of the organization's functioning;
- bonding or linking the organization with its environment (the environment being a source of success). Certain modern structural forms (e.g. virtual or networking forms) or directly integrated with the environment on a more or less long-term basis;
- adapting the organization to environmental changes through passive adaptation (adapting the organization to its environment) or active adaptation (adapting the environment to the organization).

The presented functions of organizational structure still remain relevant despite the fact that they may have been formulated many years ago. Moreover, they are often enriched with new contents stemming from the contemporary practice of management.

1.3. Conceptual Variables of Organizational Structure

Organizational design is the result of numerous factors often called conceptual variables. Despite their multitude, they seem to fit into three classes:

- external factors, i.e. company environment;
- internal factors include the age and size of the organization, technology, organizational tradition and culture, financial and economic conditions, level of employee qualifications, powers and views of management, the degree of production diversification etc.;
- company strategy.

It needs to be stressed how important and special the role of company strategy is as a factor determining the company's organizational structure. The strategy is formed on the basis of the analysis of features of people, tasks, technology, structure, and company environment. Consequently, a strategy is a particular contextual feature, which outlines the production programme, affects the choice of technology, and defines the environment and its desired size. Moreover, a strategy defines the lines of subordination and information channels between various managers and departments. A strategy affects information flow along these lines and also the mechanisms of planning and decision making. Changes in the strategy of a company precede changes in its design and lead up to them. Therefore, on the one hand, a strategy may be treated as a variable acting as an intermediary between the state of the environment and the structure and subsystem of the company's management. At the same time, on the other hand, an organizational structure may be treated as a variable acting as an intermediary between the strategy and various factors affecting its form. It is synthetically presented in Figure 1.1.

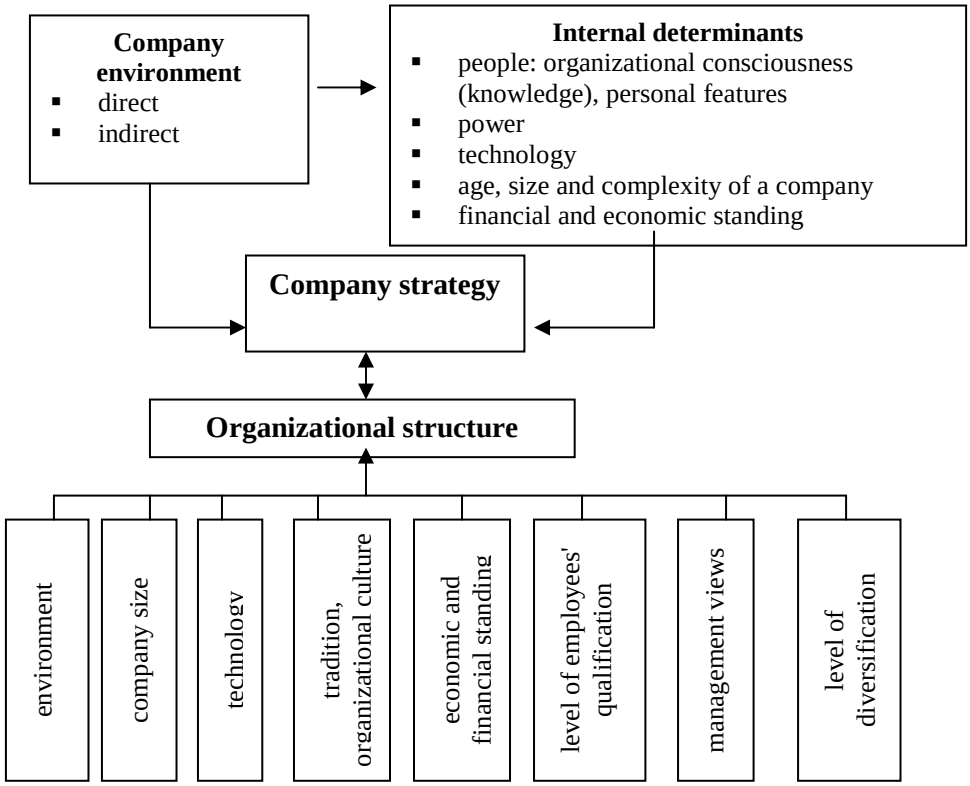

Figure 1.1. Determinants of organizational structure

Source: A. Zakrzewska – Bielawska: *Determinanty struktury organizacyjnej na przykładzie dużych polskich przedsiębiorstw produkcyjnych* in: *„Zmiana warunkiem sukcesu. Przeobrażenia systemów zarządzania przedsiębiorstwem"* J. Skalik, ed., Prace Naukowe AE we Wrocławiu, Nr 1184, Wydawnictwo AE im. Oskara Langego we Wrocławiu, Wrocław 2007, p.101

Strategy as a factor determining organizational structure is covered in greater detail further on in this chapter.

Other key organizational variables which determine organizational structure are: environment, technology, size, people and culture.

The environment includes all elements outside the boundary of the organization such as the industry, government, customers, suppliers, and the financial community. They concern the nature of change and the speed at which the organization must be able to respond and act. The patterns and events occurring in the environment can be described in several dimensions, such as whether the environment is stable or unstable, homogeneous or heterogeneous, simple or complex; the quantity and quality of resources available to support the organization's growth; whether these resources are concentrated or dispersed; and the degree of consensus in the environment regarding the organization's

intended domain.[19] An organization in a certain environment will be managed and controlled differently from an organization in an uncertain environment with respect to positions and departments, organizational differentiation and integration, control processes, and future planning and forecasting. Organizations need to have the right fit between their internal structure and external environment.

As the complexity and uncertainty in the external environment increase, so does the number of positions and departments within the organization, which in turn increases its internal complexity. This relationship is part of being an open system. Many companies have added e-business departments to handle electronic commerce and information technology departments to deal with the increasing complexity of computerized information and knowledge management systems.

The traditional approach to coping with environmental uncertainty was to establish buffer departments. The purpose of buffering roles is to absorb uncertainty from the environment.[20] Buffer departments surround the technical core and exchange materials, resources, and money between the environment and the organization. A newer approach some organizations are trying to adopt is to drop the buffers and expose the technical core to the uncertain environment. It makes them more fluid and adaptable. Boundary-spanning roles link and coordinate an organization with the key elements in the external environment. Boundary spanning is primarily concerned with the exchange of information to detect and bring into organization information about changes in the environment and secondly send information into the environment that presents the organization in a favourable light. Boundary spanners prevent the organization from stagnating by keeping top managers informed about environmental changes. Often, the greater the uncertainty in the environment, the greater the importance of boundary spanners.[21] One new approach to boundary spanning is business intelligence, which refers to high-tech analysis of large amounts of internal and external data to identify patterns and relationships that might be significant. It is related to another area known as competitive intelligence (CI), which gives top executives a systematic way to collect and analyze public information about rivals and use it to make better decisions.[22] In today's turbulent environment, many successful companies involve everyone in boundary-spanning activities. People at the grass-roots level are often able to see and interpret changes or problems sooner than managers, who are typically more removed from day to day work.[23]

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[19] R.D. Harris: *Organizational Task Environments: An Evaluation of Convergent and Discriminant Validity*, Journal of Management Studies 41, no. 5/ 2004, p. 857-882

[20] J.D. Thompson: *Organizations in Action*, McGraw – Hill, New York 1967, p. 20

[21] R.C. Schwab, G.R. Ungson, W.B. Brown: *Redefining the Boundary-Spanning Environment Relationship*, Journal of Management no 11/ 1985, p. 75

[22] K.A. Sawka, *Demystifying Business Intelligence*, Management Review, October 1996, p. 47

[23] E.M. Epstein: *How to Learn from the Environment about the Environment – A Prerequisite for Organizational Well – Being*, Journal of General Management 29 no 1/2003, p. 68

Another response to environmental uncertainty is the amount of differentiation and integration among departments. When the external environment is complex and rapidly changing, organizational departments become highly specialized to handle the uncertainty in their external sector. A study by P. Lawrence and J. Lorsch[24] examined three organizational departments – manufacturing, research and sales, which are presented table 1.2.

Table 1.2. Differences in goals and orientation among organizational departments

Characteristic	R&D Department	Manufacturing Department	Sales Department
goals	new developments, quality	efficient production	customer satisfaction
time horizon	long	short	short
interpersonal orientation	mostly task	task	social
formality structure	low	high	high

Source: R.L. Daft, *Understanding the Theory and Design of Organizations*, Thomson South-Western, United Kingdom 2007, p.62

The result of high differentiation is that coordination among departments becomes difficult, and the quality of collaboration among departments is integration. Formal integrators are often required to coordinate departments. When the environment is highly uncertain, frequent changes require more information processing to achieve horizontal coordination, so integrators become a necessary addition to the organization's structure. Sometimes integrators are called liaison personnel, project managers, brand managers or coordinators.

Lawrence and Lorsh's research concluded that organizations perform better if the levels of differentiation and integration match the level of uncertainty in the environment. Organizations that performed well in uncertain environments had high levels of both differentiation and integration, while those performing well in less uncertain environments had lower levels of differentiation and integration.[25]

Another response to environmental uncertainty is the amount of formal structure and control imposed on employees. Research in this area was made by Burns and Stalker.[26] They found that firms could be classified according to the extent that they relied upon bureaucracy or upon less formalized social interaction. They identified two organizational forms: mechanistic forms that were characterized by bureaucracy and organic forms that were a less formalized organizational type where coordination relied upon mutual adjustment, jobs

[24] P.R. Lawrence, J.W. Lorsch: *Organization and Environment*, Homewood Irwin 1969, p.23-29

[25] P.R. Lawrence, J.W. Lorsch: "*Environmental Factors and Organizational Integration*" in "*Organizational Planning: Cases and Concepts*", P.R. Lawrence, J.W. Lorsch, eds., Homewood Irwin and Dorsey 1972, p. 40-45

[26] T. Burns, G.M. Stalker: *The Management of Innovation*, London, Tavistock 1961

were less narrowly defined, and patterns of interaction were flexible and multidirectional. Table 1.3 contrasts the key characteristics of the two forms.

Table 1.3. Mechanistic vs. Organic Organizational Forms

Feature	Mechanistic	Organic
Task definition	rigid and highly specialized	flexible and less narrowly defined
Coordination and control	rules and directives vertically imposed	mutual adjustment, common culture
Communication	vertical	vertical and horizontal
Knowledge	centralized	dispersed
Commitment and loyalty	to immediate superior	to the organization and its goals
Environmental context	stable with low technological uncertainty	unstable with significant technological uncertainty and ambiguity

Source: R. Butler: *Designing Organizations: A Decision making Perspective*, London: Routledge 1991, p.76

As environmental uncertainty increases, organizations tend to become more organic, which means decentralizing authority and responsibility to lower levels, encouraging employees to take care of problems by working directly with one another, encouraging teamwork, and taking an informal approach to assigning tasks and responsibilities. Thus, the organization is more fluid and is able to adapt continually to changes in the external environment.

The ways environmental uncertainty influences organizational characteristics are summarized in Table 1.4. The low uncertainty environment is simple and stable, so organizations have few departments and a mechanistic structure. In the low moderate uncertainty environment, more departments are needed along with more integrating roles to coordinate them, and some planning may occur. The high moderate uncertainty is unstable but simple. Organizational structure is organic and decentralized. Planning is emphasized and managers are quick to make internal changes as needed. The high uncertainty environment is both complex and unstable, so organizations are large and have many departments, but they are also organic. A large number of management personnel are assigned to coordination and integration, and the organization uses boundary spanning, planning and forecasting to enable high speed response to environmental changes.

Another characteristic of the organization-environment relationship is called resource-dependence. It means that organizations depend on the environment but strive to acquire control over resources to minimize their dependence.[27] In response to the need for resources, organizations try to maintain a balance between linkages with other organizations and their own independence.

[27] D. Ulrich, J.B. Barney: *Perspectives in Organizations: Resources Dependence, Efficiency and Population*, Academy of management Review 9/1984, p. 471

Organizations maintain this balance through attempts to modify, manipulate, or control other organizations. Two strategies can be adopted to manage resources in the external environment: establishing favourable linkages with key elements in the environment (ownership, contracts, joint ventures, cooptation, and executive recruitment) or shaping the environmental domain (change of domain, political activity, regulation, trade associations, illegitimate activities).[28] The more dependent an organization is on other organizations for material and financial resources, the more important it is to either establish favourable linkages with those organizations or control entry into the domain. If dependence on external resources is low, the organization can maintain autonomy and does not need to establish linkages or control the external domain.[29]

Table 1.4. Contingency framework for environmental uncertainty and organizational responses

		Environmental complexity	
		simple	**complex**
Environmental change	**stable**	**Low uncertainty** • mechanistic structure: formal, centralized • few departments • no integrated roles • current operations orientation: low speed response	**Low moderate uncertainty** • mechanistic structure: formal, centralized • many departments, some boundary spanning • few integrating roles • some planning: moderate-speed response
	unstable	**High moderate uncertainty** • organic structure, teamwork: participative, decentralized • few departments, much boundary spanning • few integrating roles • planning orientation, fast response	**High uncertainty** • organic structure, teamwork: participative, decentralized • many departments differentiated, extensive boundary spanning • many integrating roles • extensive planning, forecasting, high speed response

Source: R.L. Daft: *Understanding the Theory and Design of Organizations*, Thomson South-Western, United Kingdom 2007, p.67

In turn, M.A. Aiken and J. Hage have found that innovative organizations tend to acquire additional resources and one of the possible means of broadening access to those resources is to enter into cooperation with other organizations and to implement joint programmes with them. This intensifies problems with coordination and control and consequently organizations become strongly

[28] P. Smith Ring, A.H. Van de Ven: *Developmental Processes of Corporative Interorganizational Relationships*, Academy of Management Review 19/1994, p. 90-118
[29] R.L. Daft: *Understanding*…..,op.cit., p.73

dependent on environment, more internally diversified, less centralized, and develop more channels of internal communication.[30]

Technology is a combination of knowledge, equipment, and work methods used to transform inputs into outputs. It is the way tasks are accomplished using tools, equipment, techniques, and human know-how. The availability of proper technology is the cornerstone of productivity, and the nature of the core technologies in use must be considered in organizational design.

An important study of technology and structure was conducted by J. Woodward.[31] She developed a scale and organized the firms according to the technical complexity (extent of mechanization) of the manufacturing process. High technical complexity means that most of the work is performed by machines, and low complexity means workers play a larger role in the production process. She classified core manufacturing technologies into three categories:

- small batch and unit production – custom production in small quantities to customer specification,
- mass production – standardized production in large quantities by assembly line,
- continuous process production – continuous production through an automated system.

Woodward found that the best small batch and continuous process plants had more flexible structures (organic structures). They are more free-flowing and adaptive, with fewer procedures and less standardization. The best mass production operations were more rigidly structured. They need mechanistic structures, with standardized jobs and formalized procedures. The implication of this research has become known as the technological imperative – that is, technology is a major influence on organizational structure.

In the years since Woodward's research, new developments have occurred in manufacturing technology. Most of today's factories use a variety of new technologies, including robots, numerically controlled machine tools, computerized software for product design, engineering analysis etc. The ultimate automated factories are referred to as flexible manufacturing systems (FMS). It is the result of three subcomponents: computer aided design (CAD), computer aided manufacturing (CAM), and integrated information network. Flexible manufacturing reaches its ultimate level of improving quality, customer service, and cost cutting when all the parts are used interdependently and combined with a flexible management process in a system referred to as lean manufacturing (it uses trained employees at every stage of the production process who take a painstaking approach to details and problem solving to cut waste and improve quality). Comparing FMS with traditional mass production technologies, it has a

[30] M. Hopej: *Dokonywanie zmian w strukturze organizacyjnej*, Wydawnictwo Politechniki Wrocławskiej, Wrocław 1994, p.22

[31] J. Woodward: *Industrial Organization: Theory and Practice*, Oxford University Press, London 1965

narrow span of control, few hierarchical levels, adaptive tasks, low specialization and decentralization, and the overall environment is characterized as organic and self-regulative.[32] FMS can help companies be more competitive when top managers make a commitment to implement new structures and processes that empower workers and support a learning and knowledge-creating environment.[33]

Ch. Perrow[34] specified two dimensions of technology: variety and analyzability. They form the basis of four major categories of technology: routine, craft, engineering and non-routine. Routine and engineering technologies are associated with a mechanistic structure and processes, and non-routine and craft technologies are associated with an organic structure, and department management is more flexible and free-flowing.

The importance of technology is not limited to manufacturing. It also applies to the service sector, although here the core technologies can be slightly different. In health care, education and related services, an intensive technology focuses the efforts of many people with special expertise on the needs of patients or clients. In banks, real estate firms, insurance companies, employment agencies, and similar enterprises, a mediating technology links together parties seeking a mutually beneficial exchange of values – typically a buyer and a seller. Finally, a long-linked technology can function like mass production where a client is passed from point to point for various aspects of service delivery. More organic design alternatives are best suited to organizations using intensive technology, and more mechanistic using long-linked technologies.[35]

Today, all the various computer based systems have begun to merge into an overall IT system that can be used to add strategic value. Intranets, ERP and knowledge management systems are used primarily to support a greater internal coordination and flexibility. Advanced IT has a significant impact on organization design. Technology has enabled the creation of a network organization structure, in which a company subcontracts most of its major functions to separate companies that are connected electronically to the organization's headquarters. Other specific implications of advances in technology for organization design include smaller organizations, decentralized organization structures, and improved internal and external coordination.[36]

Another conceptual variable is **corporate culture** defined as a system of shared beliefs and values that develops within an organization and guides the behaviour of its members.[37] Culture can be observed and interpreted through

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[32] R.L. Daft: *Understanding*…op.cit,, p.405 - 411

[33] P.R. Diumering, F. Safayeni, L. Purdy: *Integrated manufacturing: Redesign the Organizational before Implementing Flexible Technology*, Sloan Management Review, Summer 1993, p.49

[34] D. L. Goodhue, R.L. Thompson: *Task Technology Fit and Individual Performance*, MIS Quarterly, June 1995, p. 213- 236

[35] J.R. Schermerborn Jr., *Management for Productivity*, John Wily & Sons, Inc., Toronto 1993, p.319

[36] R.L. Daft: *Understanding*… op.cit., p. 464.

[37] E. H. Schein: *Organizational Culture and Leadership*, Jossey-Bass, San Francisco, 1992, p. 12.

rites and ceremonies, stories and heroes, symbols and language. It can be assessed along many dimensions, such as the extent of collaboration versus isolation among people and departments, the importance of control and where control is concentrated, or whether the organization's time orientation is short range or long range.[38] Considering the extent to which the competitive environment requires flexibility and stability and the extent to which the organization's strategic focus and strength are internal or external we can distinguish four categories of culture: [39]

- adaptability – strategic focus on the external environment through flexibility and change to meet customer needs; encourages entrepreneurial values, norms and beliefs that support the capacity of the organization to detect, interpret and translate signals from the environment into new behaviour responses; innovations, creativity and risk taking are valued and rewarded;
- mission – emphasis on a clear vision of the organization's purpose and on the achievement of goals; managers shape behaviour by envisioning and communicating a desired future state for the organization due to a stable environment;
- clan – focus on the involvement and participation of the organization's members and on rapidly changing expectations from the external environment; it also focuses on the needs of employees as a way to high performance;
- bureaucratic – an internal focus and consistency for a stable environment, a high level of consistency, conformity, and collaboration among members, highly integrated and efficient.

These categories relate to the fit among cultural values, strategy, structure, and the environment.

A company's size from a structural perspective is the total number of its employees. According to design dimensions, formalization, specialization and standardization all tend to be greater in a large organization, because they are necessary to control activities within it. Formalization and specialization also help a large organization decentralize decision making. Another category, hierarchy of authority is related to complexity. As size increases, complexity increases; thus, more levels are added to the hierarchy of authority. This keeps the span of control from getting too large. However, there is a balancing force, because formalization and specialization are added. The more formalized, standardized, and specialized the role within an organization, the wider the span of control can be. Table 1.5. illustrates the relationship among the design dimensions and organizational size.

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[38] J.R. Detert, R. G. Schroeder, J. J. Mauriel: *A Framework for Linking Culture and Improvement Initiatives in Organizations*, Academy of Management Review 25, no 1/2000, p.850-863

[39] D.R. Denison, A. K. Mishra: *Toward a Theory of Organizational Culture and Effectiveness*, Organization Science 6, no 2/1995, p. 204-223

Table 1.5. Relationship between basic design dimensions and organizational size

Basic design dimension	Small organizations	Large organizations
Specialization	low	high
Standardization	low	high
Complexity	low	high
Centralization	high	low
Hierarchy of authority	flat	tall
Formalization	less	more

Source: D.L. Nelson, J.C. Quick, Understanding Organizational Behavior. A Multimedia Approach, South Western, Ohio 2002, p.417

Although some have argued that the future belongs to small, agile organizations, others argue that size will continue to be an advantage. To take advantage of it, organizations must become centreless corporations with a global core.[40] Organizational size is closely connected with strategy and life cycle.

1.4. Strategy and Life Cycle as Organizational Structural Factors

A.D. Chandler[41] was a precursor of research into the relationships between strategy and organizational structure. His landmark study found that changes in an organization's strategy bring about new administrative problems which, in turn, require a new or refashioned structure for the new strategy to be successfully implemented. His study of 70 large corporations revealed that structure tends to follow the growth strategy of the firm – but often not until inefficiency and internal operating problems provoke a structural adjustment. The experiences of these firms followed a consistent sequential pattern: new strategy creation, emergence of new administrative problems, decline in profitability and performance, shift to a more appropriate organizational structure, and recovery to more profitable levels and improved strategy execution. Chandler found this sequence to be oft-repeated as firms grew and modified their corporate strategies. Thompson and Strickland[42] comment that the structure-follows-strategy thesis is undergirded with powerful logic: how organizational activities are structured is a means to an end, and not an end in itself. Structure is a managerial device for facilitating the execution of the organization's strategy and helping to achieve performance targets. An organization's structural design is a tool for "harnessing" individual efforts and coordinating the performance of diverse tasks; a good design helps people do things efficiently and effectively. If activities and responsibilities are deliberately organized to link structure and strategy, it is easier to coordinate

[40] "*Organizational design in the 21st Century*", Journal of Business Strategy 19 / 1998 , p.33-35
[41] A. D. Chandler: *Strategy and Structure*, Cambridge 1962
[42] A.A. Thompson, A.J. Strickland: *Strategic Management – Concepts and Cases*, Irwin Homewood, IL, Boston 1992

strategic moves across functional areas. Moreover, efforts to execute strategy on a day-to-day basis are less likely to result in frustration, finger-pointing when foul-ups occur, interdepartmental frictions, and inefficiency.

Chandler's thesis can also be turned around, especially in the conditions of deep and quick changes in the environment, which has been confirmed by numerous studies. It turns out that organizational structure also substantially affects defining the strategic process, and, as a consequence "strategy follows structure". Mintzberg[43], who is the main supporter of this view, noticed that the strategy-structure relationship is characterized by the fact that strategy is determined mainly by external factors while structure by internal factors. The premises of this approach were also presented earlier by Ansoff [44], who noticed that many companies implement new structural solutions preceding changes of environment and strategy, creating the strategic potential which allows for a quick adjustment. On the other hand, Fredickson noted that the structure, determining the division of functions and communication channels between organizational units, at the same time limits environmental perception, as well as the type of information from the environment and capabilities to process such information. This, in turn, affects the decision-making process of the strategy modelling and finally the strategy itself.[45]

Research into the strategy-organizational structure relation was continued by Lawrence and Lorsch (1967), Child (1972), Scott (1973), Rumelt (1974), Miles and Snow (1978), Boschken (1990), Drucker (1998) and by many others. Polish researchers include Stabryła (1991), Bielski (1996), Krupski and Przybyła (1996), and others.

Organizational structure as the factor in strategy implementation was also indicated in McKinsey's 7-S[46]. The model starts with the premise that an organization is not just a structure but consists of seven elements: strategy, structure, systems (the hard S's), style/culture, staff, skills, shared values (the soft S's). On the basis of recent observations, a conception defined as a new 7-S framework was formed. This model consists of different seven elements: stakeholder satisfaction, strategic soothsaying, speed, surprise, shifting the rules, signalling strategic intent, simultaneous and sequential thrusts.[47]

The relationship between the strategy, organizational structure and the environment were researched by Hrebiniak and Joyce[48], and earlier by Child[49]

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[43] H. Mintzberg: *The Design School: Reconsidering the Basic Premises of Strategic Management*, Strategic Management Journal, March 1990

[44] H.I. Ansoff: *Strategic Management*, Macmillan Press, United Kingdom 1979

[45] B.J. Hodge, W.P. Anthony: *Organization Theory*, Allyn and Bacon, Boston 1988

[46] T. Peters, R. Waterman: *In Search of Excellence*, Harper & Row, New York, London 1982

[47] R. Veliyath, E. Fitzgerald: *Firm Capabilities, Business Strategies, Customer Preferences, and Hypercompetitive Arenas: The Sustainability of Competitive Advantages with Implications for Firm Competitiveness*, Customer Relationship 10/2000, p.66-67

[48] L.G. Hrebiniak, W.F. Joyce: *Organizational Adaptation: Strategic Choice and Environmental Determinism*, Administrative Science Quartely, September 1985

[49] J. Child: *Organizational Structure, Environment and Performance: the Role of Strategic Choice*, Sociology 6 / 1972

and Aldrich.[50] As a result of their research, another two theories were developed: strategic choice and organizational ecology.

Another force reshaping organizations is the globalization of organizations and markets. Global strategies add another type of complexity to the structural design process and necessitate the creation of integrating mechanisms so that people are able to understand and interpret one another as well as coordinate with one another. The choice of structure for managing an international business is based on choices concerning the level of vertical and horizontal differentiation and the degree of formalization, specialization and centralization. A global structure must allow decisions to be made in the most appropriate area of the organization. However, controls must be in place that reflect the strategies and goals of the parent firm.[51]

Nowadays, in the literature it is also possible to come across views proclaiming the demise of strategy and related uncertainty which is intensified by the decomposition of organizational structures.[52] Both, the environment and the internal organization of present-day companies become more and more unpredictable. Thus the situation during strategy development may be substantially different from the situation during strategy implementation, which results in additional costs of strategy modification. Uncertainty and confusion among the employees, customers and partners increase. The phenomenon intensifies as environmental unpredictability and the scale, range and degree of strategy complexity increases. Decomposition of organizational structures is related to the creation of organizational networks, that is, loosely bound, autonomous units which carry out shared tasks but remain separated. Such networks may have one or several more or less dominating centres. They are characterized by changeable composition, changeable strength of interrelations, changeable objectives and tasks. This changeability is difficult to predict and therefore it generates uncertainty. Thus these are multi-criterion structures. The basic function of such networks is to share knowledge between units, which results in disintegration of monolithic structures, controlled from one centre, in a uniform manner. Units which are part of the network less and less strongly respond to typical inter-organizational management mechanisms such as orders, regulations, formal procedures, penalties, sanctions, etc. A strategy and structure interaction in this case indicate that if the strategy is burdened with high uncertainty, organizational solutions should be very flexible and easily adjustable to quick changes (networks have these characteristics).

Table 1.6 presents certain strategy types at the level of the company and corresponding structures, and Table 1.7 presents examples of how structure affects strategic decisions.

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[50] H.E. Aldrich: *Organizations and Environments*, Prentice-Hall, Englewood Cliffs, NJ 1979

[51] C. Hill, G. Jones: *Strategic Management Theory*, 2nd edition Boston: Houghton Mifflin 1992

[52] A. Koźmiński: *Zarządzanie w warunkach niepewności*, Wydawnictwo Naukowe PWN, Warszawa 2005, p. 36-42

Table 1.6. Framework of structural and strategic dimensions

Author	Strategy	Organizational Structure
D. Miller	Innovation – to understand and manage new processes and technologies	Low formalization, decentralization, flat hierarchy
	Market differentiation – to specialize in customer preferences	Moderate to high complexity, moderate to high formalization, moderate centralization
	Cost control- to produce standardized products efficiently	High formalization, high centralization, high standardization, low complexity
Steinmann, Schreyogg	One product	Functional/centralization
	Related diversification	Divisional/decentralization
	Unrelated diversification	Holding/ high decentralization
M. E. Porter	Differentiation	Learning orientation: acts in a flexible, loosely knit way with strong horizontal coordination; values and builds in mechanisms for customer intimacy; strong research capability; rewards employee creativity, risk taking and innovation
	Low cost leadership	Efficiency orientation; strong central authority; tight cost control with frequent, detailed control reports; standard operating procedures; highly efficient procurement and distribution systems; close supervision; routine tasks, limited employee empowerment
R.E. Miles Ch. C. Snow	Prospector	Learning orientation: flexible, fluid, decentralized structures; strong research capability
	Defender	Efficiency orientation: centralized authority and tight cost control; emphasis on production efficiency; close supervision
	Analyzer	Balances efficiency and learning: tight cost control with flexibility and adaptability; efficient production for stable product lines; emphasis on creativity, research, risk taking for innovation
	Reactor	No clear organizational approach; design characteristics may shift abruptly, depending on current needs

Source: D. Miller: *The Structural and Environmental Correlates of Business Strategy*, Strategic Management Journal 8/ 1987, p.55-76; R.L. Daft: *Understanding the Theory and Design of Organizations*, Thomson South- Western, United Kingdom 2007, p. 168

Table 1.7. Examples of how structure affects the strategic decision process

Design dimension	**Influence on strategic decisions -** as the level of these design dimensions increases, so does the probability of the following:
Centralization	- the strategic decision process will be initiated by only a few dominant individuals - the decision process will be goal-orientated and rational - the strategic process will be constrained by top managers' limitations
Complexity	- the strategic decision process will be become more politicized - the organization will find it more difficult to recognize environmental opportunities and threats - the constraints on good decision process will be multiplied by the limitations of each individual within the organization
Formalization	- the strategic decision process will become reactive to crisis rather than proactive through opportunities - strategic moves will be incremental and precise - differentiation in the organization will not be balanced with an integrative mechanism - only environmental crises that are in areas monitored by formal organizational systems will be acted upon

Source: D.L. Nelson, J.C. Quick, *Understanding Organizational Behavior. A Multimedia Approach*, South Western, Ohio 2002, p. 435

Organizations' own strategies, especially growth strategies ebb and flow through different stages. These stages are called **organizational life cycles**. The term life cycle suggests that organizations are born, grow older and eventually die. Organizational subunits may have very similar life cycles. Because of changes in technology and product design, many organizational subunits, especially those that are product based, are experiencing shorter life cycles. Hence, the subunits that make up the organization are changing more rapidly than in the past. These shorter life cycles enable the organization to respond quickly to external demands and changes.

There are four main stages in organizational life cycle:[53]

- birth stage – when the organization is founded by an entrepreneur,
- youth stage - when the organization starts to grow rapidly,
- midlife stage - when the organization has grown large with success,
- maturity stage - when the organization stabilizes at a large size.

[53] J.R. Kimberly, R.H. Miles: *The Organizational Life Cycle*, San Francisco: Jossey Bass 1980

In its birth stage an organization is founded by a single entrepreneur. While it remains small, the founder usually "runs" things and the structure stays quite simple. The organization starts to grow rapidly during the youth stage, when management responsibilities begin to spread among more people. Here, a simple structure begins to exhibit the stresses of change. An organization in the midlife stage has grown ever larger with continued success. Its structure usually gets more complex and increasingly formal. The number of managers and staff increases greatly. More levels appear in the chain of command. Decentralization may or may not occur, and the founder may have difficulty remaining in control. Finally the organization reaches a maturity stage when it stabilizes in size, typically with a mechanistic structure. The risk of becoming complacent and slow in competitive markets exists, and steps must be taken to foster creativity and innovation. But at the very time when adaptiveness is needed, bureaucratic tendencies may lead an organization into decline. Ways of effectively managing organizational maturity and large size must be found.

Shorter life cycles put more pressure on the organization to be both flexible and efficient at the same time. Further, as flexible organizations use design to their competitive advantage, discrete organizational life cycles may give way to a kaleidoscope of continuously emerging, efficiency-seeking organizational designs.[54]

Growing organizations must change their organizational structures. A model of the evolution of organizational structures in the process of company development is presented in Figure1.2.

On the other hand, not all organizations are growing. Every organization goes through periods of temporary decline. One way of it is downsizing. This response is often used when top management is challenged to quickly reduce costs and increase productivity. Downsizing is often part of a restructuring process, which is discussed in chapter 4. A different way of overcoming the disadvantages of large size is allowing many smaller units to operate with considerable autonomy within the framework a larger organization. This often involves reorganizing with a greater emphasis on team structures and network structures.

[54] J.C. Quick: *Crafting an Organizational Culture: Herb's Hand At Southwest Airlines*, Organizational Dynamics, Autumn 1992, p.45-56

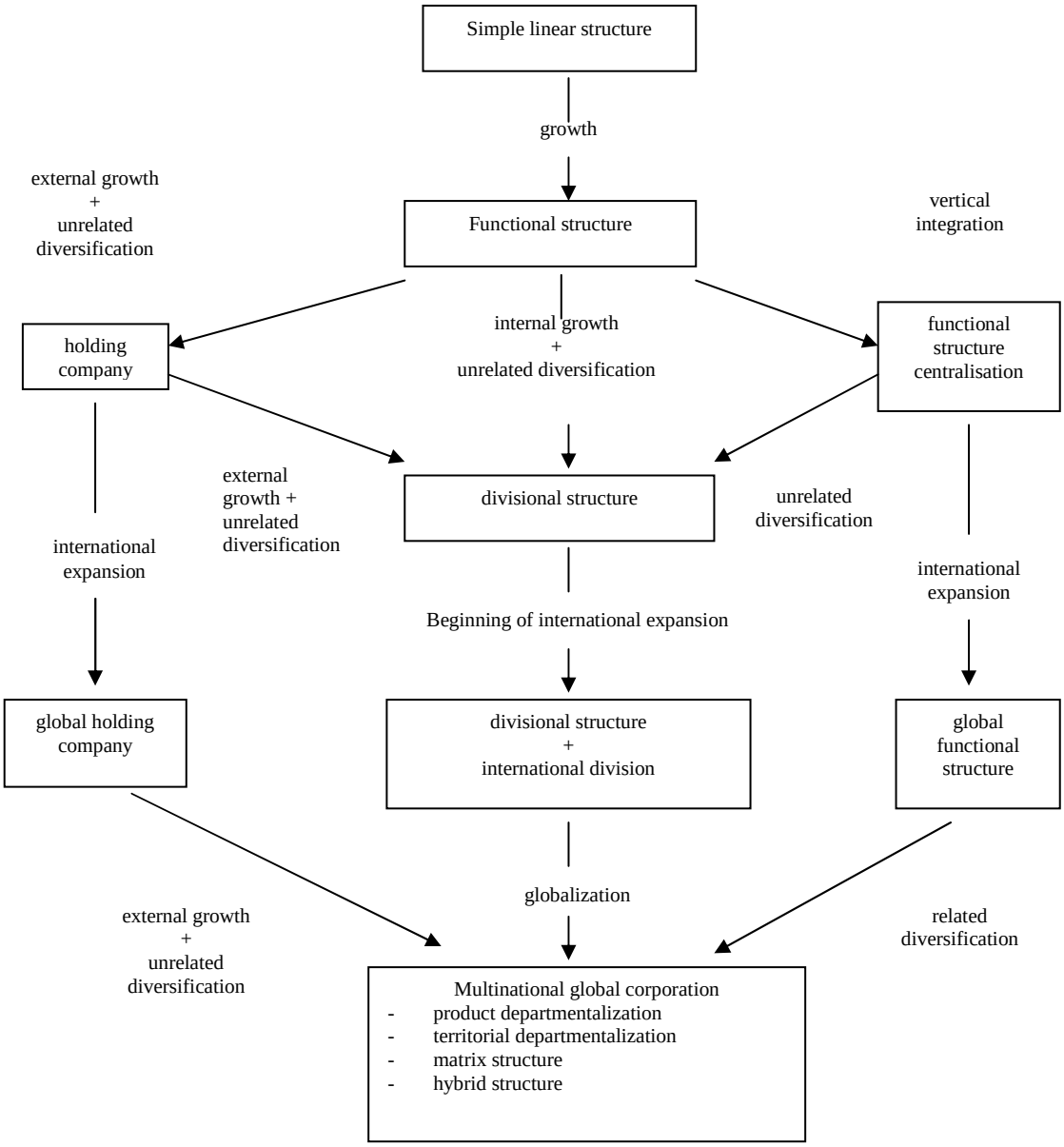

Figure 1.2. Model of the evolution of organizational structure in the process of company development

Source: Strategor: Zarządzanie firmą. Strategie, struktury, decyzje, tożsamość, PWE, Warszawa 2001, p.281

Managers should design an organization model that fits the strategy, size and life cycle of the company, and also the above-mentioned environment, technology and culture. Finding the right fit leads to organizational effectiveness, whereas a poor fit can lead to the decline or even the demise of the organization.

2. DILEMMAS OF DESIGNING ORGANIZATIONAL STRUCTURE

Anyone seeking to design an organization needs to make certain decisions about how it should be structured. J. Child[55] has identified five main questions which a designer of an organization needs to ask:

1. Should jobs be broken down into narrow areas of work and responsibility, so as to secure the benefits of specialization? Or should the degree of specialization be kept to a minimum in order to simplify communication, and to offer members of the organization greater scope and responsibility in their work? Another choice arising in the design of jobs concerns the extent to which responsibilities and methods attached to them should be precisely defined;
2. Should the overall structure of an organization be "tall" rather than "flat" in terms of its levels of management and spans of control? What are the implications for communication, motivation and overhead costs of moving towards one of these alternatives rather than the other?
3. Should jobs and departments be grouped together in a functional way according to the specialist expertise and interests that they share? Or should they be grouped according to different geographical areas being served, or according to yet another criterion?
4. Is it appropriate to aim for an intensive form of integration between the different segments of an organization or not? What kind of integrative mechanisms are there to choose from?
5. What approach should management take towards maintaining adequate control over work done? Should it centralize or delegate decisions, and all or only some of them? Should a policy of extensive formalization be adopted in which standing orders and written records are used for control purposes? Should work be subject to close supervision?

To answer these questions the Aston study identified five primary variables, called design dimensions, such as: specialization and standardization, configuration, centralization, coordination and formalization. And these dimensions, which often crop up as specific dilemmas of organizational design, are discussed in this chapter.

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[55] J. Child: *Organization. A Guide to Problems and Practice*, 2nd edition, Harper &Row, London 1987, p.8

2.1. Specialization

An important series of decisions on organizational design are related to what types of jobs should be created. Decisions here relate to the issue of division of work or specialization, which means the narrowing of the work to be done by an individual.

Division of work is a breakdown of a complex task into components so that individuals are responsible for a limited set of activities instead of the task as a whole. It is also sometimes referred to as division of labour.[56] Division of work creates simplified tasks that can be learned and completed relatively quickly. Thus it fosters specialization, as each person becomes expert in a certain job. And, as it creates a variety of jobs, people can choose or be assigned to positions that match their talents and interests.

Division of labour in organizations can be carried out in three different ways:[57]

- Work can be divided into different personal specialties. Most people think of specialization in the sense of occupational and professional specialties. Thus, we think of accountants, software engineers, graphic designers, and a myriad of other specialties that exist in organizations and everyday life;
- Work can be divided into different activities necessitated by the natural sequence of the work the organization does. For example, manufacturing plants often divide work into fabricating and assembly, and individuals will be assigned to do only one of these two activities. This particular manifestation of division of work is termed horizontal specialization;
- Work can be divided along the vertical plane of an organization. All organizations have a hierarchy of authority from the lowest – level manager to the highest-level managers. The CEO's work is different from the shift supervisor's.

Determining what each job in the organization should do is a key managerial decision. The important point to keep in mind for now is that jobs vary along a general dimension of specialization with some jobs being more highly specialized than others. Managers can change an organization's structure by changing the degree of specialization of jobs.

A high degree of specification helps to motivate employees by letting them know exactly what is expected of them. Such a level of detail can also assist in appraising their past performance. Others believe that, far from being motivating, a high level of job definition tends to control people's behaviour and sets minimum performance standards. They argue that, for the employee, it is important to create his or her own job. In practice, a detailed job definition is

[56] J.A.F. Stoner, R.E. Freeman, D.R. Gilbert, Jr.: *Management*, 6th edition, Prentice Hall Inc 1995, p.316

[57] P.S. Adler: *Building Better Bureaucracies*, Academy of Management Executive, November 1999, p. 36-49

applied to low level manual and clerical jobs while at more senior levels there is a greater degree of freedom allowing managers to shape their jobs.[58]

Job specialization also has its disadvantages. If tasks are divided into small discrete steps, and if each worker is responsible for only one step, then alienation – the absence of a sense of control – may easily develop. Boredom also can be a by-product of specialized tasks that become repetitious and personally unsatisfying. The ways to overcome workplace alienation are job enlargement, job rotation, and job enrichment. **Job enlargement** is the combination of various operations at a similar level into one job to provide more variety for workers and thus increases their motivation and satisfaction. It's a method of job design that increases the number of activities in a job to overcome the boredom of overspecialized work. **Job rotation** is a variation of job enlargement in which workers are exposed to variety of specialized jobs over time. **Job enrichment** represents an increase in job depth. Work activities from a vertical slice of the organizational unit are combined into one position to give the employees more autonomy in their jobs. The idea is to develop a stronger sense of accountability by allowing workers to set their own work pace, correct their own errors, and decide the best way to perform various tasks. They may also be asked to help make decisions that affect their own subunits. As the work becomes more challenging and worker responsibility increases, motivation and enthusiasm should increase as well.

Specialization also comes at a cost. The more a production process is divided between different specialists, the greater coordination costs are. The more volatile and unstable the external environment, the greater the number of decisions that need to be made and again the higher coordination costs are. Hence, the more stable the environment is, the greater the optimum division of labour is. This is true both for firms and for entire societies.[59]

Advantages and disadvantages of job specialization are summarized in Table 2.1.

A special issue is the role of specialization in company management. A good manager is not necessarily the best specialist in a given field. Conversely, an excessively specialist (engineering) orientation may make it more difficult to take decisions that are the most appropriate from the point of view of organization. An attempt to reconcile solutions focused on specialization with the need of taking a broad view upon making managerial decisions is the conception of a so-called line and staff.

Line managers are responsible for work activities that make a direct contribution to the organization's output. Their efforts clearly influence the process whereby resource inputs are transformed into finished goods and services. **Staff managers**, by contrast, use special technical expertise to support

[58] A. Huczynski, D.A. Buchanan: *Organizational Behaviour*, 2nd edition, Prentice Hall International (UK) 1991, p.374

[59] R.M. Grant: *Contemporary*…. op.cit., p.192

the efforts of line personnel.[60] Staff positions and units are based on specialists, their expert knowledge and experience. They are linked to line units by relations of dependence which are expressed in functional bonds. This conception is reflected in the staff-line type of organizational structure.

Table 2.1. Advantages and disadvantages of job specialization

Job specialization	
Advantages	**Disadvantages**
- Making use of routine technology - Making use of specialized technical appliances - Making full use of the specialist qualifications of employees - Time saving - Increase in productivity - Acquiring skills	- "Despecialization" of employees - Monotony leading to physical and mental fatigue - Line employees may find it difficult to see the relationship between their work and the organization's goals - Employees may find it difficult to retrain and adapt to a new kind of activity

Source: M. Bielski: *Organizacje. Istota, struktury, procesy*, Wydawnictwo Uniwersytetu Łódzkiego, Łódź 1997, p.173-174

The choice concerning the extent and type of specialization depends on the criteria used by the organizational designers. These in turn will be affected by their values, beliefs and preferences.

After division of labour, managers must use some principle to combine the divided task into groups or departments containing some specified number of individuals or jobs and they have to define the span of control. It's another design dilemma called configuration.

2.2. Configuration

Having decided on the degree of job specialization, it is then necessary to group jobs into sections, link the sections into units, locate the units within departments and coordinate the departments. Thus, job grouping (departmentalization) constitutes the second major area of organizational design. The third area is hierarchy of authority. It is the degree of vertical differentiation through reporting relationships and the span of control within the structure of the organization. Departmentalization and hierarchy of authority create configuration, which means the shape of organizational structure.

[60] J.R. Schermerborn Jr., *Management*……op.cit., p.12-13

Departmentalization is the result of managers deciding what work activities, once they are divided into jobs, can be connected in "like" groupings. There are many varieties of jobs and departments within organizations, and jobs and departments will vary from one organization to the next. Departmental grouping affects employees because they share a common supervisor and common resources, are jointly responsible for performance, and tend to identify and collaborate with one another.[61] Additional factors that influence the efficiency of different organizational arrangements include: economies of scale, economies of utilization, learning and standardization of control systems.[62]

Jobs can be grouped according to several criteria: function, product or service, customer, place/territory/geographical, process, time and technology used:[63]

- **functional departmentalization** – places together employees who perform similar functions or work processes or who contribute similar knowledge and skills. Some firms organize work units according to business functions such as finance, marketing, human resources and production;
- **product departmentalization –** this approach organizes work units based on the goods or services the company offers;
- **customer departmentalization** - separate groups are organized for different types of customers. A firm that offers a variety of goods and services targeted at different types of customers might structure itself based on this criterion;
- **place/territory/geographical departmentalization** – this form organizes units by geographical regions within a country or, for a multinational firm, by regions throughout the world. This departmentalization may be used where the service is most economically provided at a limited distance;
- **process departmentalization** – some goods and services require multiple work processes to complete their production. This horizontal grouping means employees are organized around core work processes, end-to-end work, information and material flows that provide value directly to customers. All the people who work on a core process are brought together in a group rather than being separated into functional departments;
- **time departmentalization** – hospitals and factories offering a 24- hour service or producing round the clock will have different groups for different shifts;

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[61] H. Mintzberg: *The Structuring of Organizations*, Prentice Hall, Englewoods Cliffs New York 1979

[62] R.M. Grant: *Contemporary Strategy*……op.cit., p.201-202

[63] L. E. Boone, D. L. Kurtz: *Contemporary Business 2006*, Thomson South-Western 2006, p. 285; R.L. Daft: *Understanding the Theory and Design of Organizations*, Thomson South- Western, United Kingdom 2007, p.200-202; A. Huczynski, D.A. Buchanan: *Organizational*……op.cit., p.389-390

- **technological departmentalization** – the type technology (small batch, mass production) can be a criterion especially when several different types are used in a single plant;
- **virtual network departmentalization** – is the most recent approach to departmental grouping. With this grouping, the organization is a loosely connected cluster of separate components. In essence, departments are separate organizations that are electronically connected for sharing information and task completion. Departments can be spread all over the world rather than located together in one geographical location.

Organizations can group specialized jobs by a few criterions, for example by product and function and place. Sometimes organizations embrace two structural grouping alternatives simultaneously, what means **multifocused departmentalization.** These structural forms are often called matrix or hybrid.

The determination of the appropriate basis for departmentalization establishes the kinds of jobs that will be grouped together. But this determination does not establish the number of jobs to be included in a specific group, the issue of span of control. Generally, the issue comes down to the decision of how many people a manager can oversee; that is, will the organization be more effective if the span of control is relatively wide or narrow?

Span of control (or span of management) refers to the number of people and departments that report directly to a particular manager. Once work is divided, departments created, and a span of control chosen, managers can decide on a **chain of command** – a plan that specifies who reports to whom. These reporting lines are prominent features of any organization chart.

The result of these decisions is a pattern of multiple levels that is called **a hierarchy**. At the top of organizational hierarchy is a senior-ranking manager (or managers) responsible for the operations of the entire organization.[64]

Choosing an appropriate span of management for an organization depends on many factors, the most important ones being presented in Table 2.2.

The span of control can affect what happens to work relationships in one particular department. Too wide a span may mean that mangers are overextended and employees are receiving too little guidance or control. When this happens, managers may be pressured to ignore or condone serious errors, and employees' efforts can be stymied, too. In a department where a dozen or more employees are clamouring for their manager's feedback, there is a potential for frustration as well as errors. Too narrow a span, in contrast, is inefficient because managers are underutilized.

The span can also affect the speed of decision making in situations where multiple levels in the organizational hierarchy are necessarily involved. Narrow spans of management create **tall hierarchies** with many levels between the highest and lowest managers. In these organizations, a long chain of command slows down decision making, which is a disadvantage in a rapidly changing

[64] J.A.F. Stoner, R.E. Freeman, D.R. Gilbert, Jr.: *Management*, op.cit., p.317-318

environment. Wide spans, in contrast, create **flat hierarchies**, with fewer management levels between top and bottom.[65]

Table 2.2. Factors influencing span of control

No.	Particular factors and their influence
1.	Competence of superiors and subordinates (the greater it is, the broader the potential span)
2.	Physical dispersion of subordinates (the larger it is, the narrower the potential span)
3.	The manager's scope of responsibilities other than supervision (the larger it is, the narrower the potential span)
4.	Degree of desired interaction (the greater it is, the narrower the potential span)
5.	Prevalence of standard procedures (the greater it is, the broader the potential span)
6.	Similarity of the supervised tasks (the more similar they are, the broader the potential span)
7.	Incidence of new problems (the greater it is, the narrower the potential span)
8.	Preferences of superiors and subordinates

Source: R.W. Griffin, *Management*, 4th edition, Houghton Mifflin Company, Boston 1993, p. 345

A wide span of control creates more opportunities for mismanaging people than a narrow span. A flat organization is less likely to provide career development opportunities than a taller structure. On the other hand, a flat organization has fewer communication and coordination problems, encourages delegation by the managers involved, and can motivate rank-and-file employees to take greater responsibility for their output.[66]

Recently, many firms have shortened their hierarchy, eliminating middle-management levels in the firm. This is frequently called "delayering".[67] On the organization chart, it can be simply the removal of a level, but much more is involved. A simple removal creates a mismatch and miscommunication between the two remaining levels. When a level is removed, the connections between the level above and the level below must also be changed. Consequently, the information and communication must be redesigned, usually from top to bottom. Without information assessment and modification, the newly delayered firm will initially struggle. With a more advanced information technology, it is now possible to quickly achieve vertical coordination with shorter middle management, but it still requires a redesign of the organization and its use of information. It is not simply a matter of removing a layer in hierarchy and seeing what happens.

[65] J.A.F. Stoner, R.E. Freeman, D.R. Gilbert, Jr.: *Management*, op.cit., p.318

[66] G.A. Cole: *Management. Theory and Practice*, 5th edition, DP Publications, London 2000, p.181

[67] R.M. Burton, G. DeSanctis, B. Obel, *Organizational Design. A Step- by- Step Approach*, Cambridge University Press, Cambridge 2006, p.71

2.3. Centralization / Decentralization

All managers must decide what work they should do themselves and what should be left for others. At issue here is **delegation**, the process of distributing and entrusting work to other persons. Responsibility, authority and accountability are the foundations of effective delegation. Delegating maximizes the effectiveness of employees, speeds up decision making and can lead to better decisions. Despite these advantages, managers can be reluctant to delegate authority. The reason may be a manager is simply too disorganized or inflexible to delegate work effectively. Other barriers to delegation are insecurity and confusion about who is ultimately responsible for a specific task – the manager or the employee. Managers cannot sidestep their responsibility to higher-ups simply by delegating difficult or unpleasant tasks. They are always accountable for the actions of their employees – a fact that makes some managers reluctant to take a chance with delegating. Others fear that delegating authority reduces their own authority. Still others feel threatened if their employees do "too good" a job. Some employees, on the other hand, want to avoid responsibility and risk. They prefer that their managers make all the decisions.[68]

Despite these advantages and disadvantages, managers continually make decisions about delegation. At the same time, top managers make broad decisions about how much delegation they want to practice as a general rule throughout the organizational structure. These decisions are, in effect, decisions about organizational design. The degree to which formal authority is delegated by managers throughout the organization runs along continuum form centralization to decentralization. **Centralization** refers to the level of hierarchy with authority to make decisions. In centralized organizations, decisions tend to be made at the top. Conversely, **decentralization** means that decision making and communication are spread out across the company. Decentralization presents a paradox because, in a perfect bureaucracy, all decisions would be made by the top administrator, who would have perfect control. However, as an organization grows larger and has more people and departments, decisions cannot be passed to the top because senior managers would be overloaded. Thus, research into organization size indicates that larger organizations permit greater decentralization.[69] In small start-up organizations, on the other hand, the founder or top executive can effectively be involved in every decision, large and small.

Furthermore, there are no clear guidelines as to the right degree of centralization or decentralization, as it depends on a number of factors. Apart from organizational size, the most important of them include:[70]

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[68] J.A.F. Stoner, R.E. Freeman, D.R. Gilbert, Jr.: *Management*, op.cit., p. 355-358

[69] J. Hage, M. Aiken: *Relationship of Centralization to Other Structural Properties*, Administrative Science Quarterly 12 / 1967, p. 72-91

[70] See: R.L. Daft: *Understanding*…..op.cit., p.169; M. Bielski: *Podstawy teorii organizacji i zarządzania*, Wydawnictwo C. H. Beck, Warszawa 2004, p.132-133; R.W. Griffin: *Management*, op.cit., p.350

- environment (the lower its complexity and the greater its stability is, the greater the tendency for centralization),
- technology (the more routine technology is – based on long chains of connections between various positions – the greater the tendency for centralization),
- tradition (companies have a tendency to reiterate what they did in the past, so the greater the centralization in the past, the greater the tendency for centralization in the future),
- nature of decision making (the more costly and risky decision making is, the greater the tendency for centralization),
- level of employees' qualifications (the lower the employees' qualifications are, the greater the tendency for centralization),
- territorial compactness (the smaller the territorial dispersion is, the greater the tendency for centralization).

What is more, the above-mentioned factors are not necessarily consistent one with another and may be contradictory, which makes the delegation of authority and distribution of decision-making authority even more difficult. At the same time, there are authors who claim that some issues should not be decentralized; they include: defining an organization's main goals, designing organizational structure, creating corporate value systems and policy, and determining rules for division of profits.[71]

Centralization and decentralization may be considered in two dimensions: a vertical and a horizontal one. The first dimension is connected to a traditional understanding of these notions. The level of vertical centralization (decentralization) depends on the ease and costs of communication, access to the necessary information, the need to react quickly, and is rarely long-lasting. If the above-mentioned conditions change, the level of centralization also changes. On the other hand, horizontal centralization (decentralization) involves shifting (or not) of decision-making authority from managerial positions to non-managerial positions. Thus, it encompasses not only formal authority, but also informal authority (related to e.g. broad or specialist knowledge. Accepting this understanding of horizontal centralization (decentralization), four situations may be singled out: an organization may be managed horizontally (authority rests with the person having formal powers), "authority for analysts" (apart from line managers, authority, which is often indirect and follows form standardization, is enjoyed by a few representatives of the technostructure), "authority for experts" (authority is distributed only where there is knowledge; it may be either formal or informal), "authority for everyone" (authority is an attribute of every

[71] R. Rutka: *Organizacja przedsiębiorstw. Przedmiot projektowania*, Wydawnictwo Uniwersytetu Gdańskiego, Gdańsk 2001, p. 120-121

employee and does not depend either on expert knowledge or the position occupied).[72]

Furthermore, while determining the level of centralization (decentralization) other structural characteristics of the company need to be taken into account, such as specialization, configuration, coordination and formalization.

The relationship between centralization and the four design decisions are generally as follows:[73]

- the higher the specialization of labour, the greater the centralization. This relationship holds because highly specialized jobs do not require the discretion that authority provides;
- the less authority is delegated, the greater the centralization;
- the greater the use of functional departments, the greater the centralization. The use of functional departments requires that activities of several interrelated departments be coordinated. Consequently, authority to coordinate them will be retained by top management;
- the wider the spans of control, the greater the centralization. Wide spans of control are associated with relatively specialized jobs which have little need for authority.

As there are no universal solutions, and every company needs to determine the level of its centralization (decentralization) on its own taking into account its unique internal and external circumstances and fit them with other dimensions of its structure, it is noteworthy to point out the basic advantages and disadvantages of each of the solutions. The most important of them, which are often mentioned in the literature, are presented in Table 2.3.

Many developments in information technology can help managers achieve a good blend of decentralization and centralization.[74] A computer reporting system can keep them informed about a wide range of day-to-day performance matters. This adds to their security in allowing others to make more decisions. If something goes wrong, presumably, the information system will sound an alarm and allow for corrective action to be quickly taken. Present trends are for decentralization and centralization to work together in an organization.

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[72] B. Glinka, O. Hensel: *Projektowanie organizacji*, Wydawnictwo Naukowe Wydziału Zarządzania Uniwersytetu Warszawskiego, Warszawa 2006, p. 38-40

[73] J.M. Ivancevich, M.T. Matteson: *Organizational Behavior and Management*, 6th edition, McGraw Hill Irwin Inc. 2002, p.584-585

[74] G.P. Huber: *A Theory of Effects of Advanced Information Technologies on Organizational Design, Intelligence and Decision Making*, Academy of Management Review, vol. 15/ 1990, p. 67-71

Table 2.3. Advantages and disadvantages of centralization and decentralization

	Centralization	Decentralization
Advantages	• taking decisions on the basis of criteria following the goals and interests of the organization as a whole, • the possibility of closer coordination and uniformity of the organization's particular constituent elements, • the possibility to concentrate resources and authority, • a lack of competence conflicts and a full control of all organizational processes, • a greater confidentiality of strategic and tactical plans, etc.,	• faster and less costly decision making, • making better use of the qualifications and potential of members of the organization, • greater motivation of people due to the fact of carrying out difficult and responsible goals, • taking the responsibility for current decision-making off top management, • a greater possibility for efficiency measurement of the work of particular parts of the organization, • high action flexibility
Disadvantages	• action inertia and the lack of a sense of responsibility of the lower hierarchical levels; stifling the discretion and initiative of the lower levels • low action flexibility, • a longer time and a lower quality of decisions which are taken far away from the place of their realization, • overloaded information channels, • poor identification of employees with the company's goals	• a greater need for action coordination, • a possibility of the occurrence of competence conflicts, • a tendency for doubling staff units (in the headquarters and branches), • the risk of top management losing control over some areas of the company's business, • an increased demand for highly qualified staff

Source: A. Zakrzewska-Bielawska: „*Dylemat centralizacji w projektowaniu struktur organizacyjnych polskich przedsiębiorstw produkcyjnych*" in „*Zarządzanie rozwojem organizacji w społeczeństwie informacyjnym*" A. Stabryła, ed., Prace naukowe UE w Krakowie, Karków 2008

2.4. Coordination

Coordination is a complement, even a counterbalance, to the division of work and job specialization. **Coordination** is the integration of the activities of the separate parts of an organization to accomplish organizational goals. Integration mechanisms are designed to achieve unity among individuals and groups in various jobs, departments, and divisions that help keep the organization in a state of dynamic equilibrium, a condition in which all the parts of the organization are interrelated and balanced.[75]

[75] D.L. Nelson, J.C. Quick: *Understanding Organizational Behavior. A Multimedia Approach*, Thompson South- Western, Ohio 2002, p.421.

The extent of coordination depends on the nature of the tasks performed and the degree of interdependence of people in the various units performing them.[76] If these tasks require or can benefit from communication between units, then a high degree of coordination is the best. If information exchange is less important, work may be completed more efficiently with less interaction between units. A high degree of coordination is likely to be beneficial for work that is non-routine and unpredictable, where environmental factors are changing, and where interdependence is high. In addition, organizations that set high performance objectives usually require a higher level of coordination. [77]

Communication is the key to effective coordination, as it is directly dependent on the acquisition, transmission, and processing of information. The greater the uncertainty of the tasks to be coordinated, the greater the need for information is. There are two basic approaches to coordination and communication: vertical and horizontal linkages. Linkage is defined as the extent of communication and coordination among organizational elements. **Vertical linkage** is used to coordinate activities between the top and bottom of an organization and is designed primarily for control of the organization. **Horizontal linkage** refers to the amount of communication and coordination that takes place horizontally across organizational departments. Horizontal linkage mechanisms are often not drawn on the organization chart, but nevertheless are part of organization structure. Organizations may use any of a variety of structural devices to achieve vertical and horizontal linkage. The basic ones are summarized in Table 2.4.

Table 2.4. Main devices of vertical and horizontal linkages

		Character
Vertical linkages	Hierarchical referral	The vertical lines on the organization chart indicate the lines of hierarchical referral up and down the organization. If there arise problems which employees do not know how to solve, they can be referred up to the next level in the hierarchy. When the problem is solved, the answer is passed back down to lower levels. The lines of the organization chart act as communication channels.
	Rules and procedures	They provide standing information for employees without direct communication. They allow managers to have a wider span of control, because they do not have to inform each employee of what is expected and when it is expected. Rules and procedures provide a standard information source enabling employees to be coordinated without actually communicating about every task.

[76] J.L.C. Cheng: *Interdependence and Coordination in Organizations: A Role System Analysis*, Academy of Management Journal 26 no. 1/1983, p. 156-162

[77] J.A.F. Stoner, R.E. Freeman, D.R. Gilbert, Jr.: *Management*, op.cit., p. 320

	Plans and schedules	They are similar to rules and procedures and also provide standing information for employees. The most widely used plan is the budget. With carefully designed budget plans, employees at lower levels can be left on their own to perform activities within the resource allotment.
	Positions added to the structure of an organization	Adding positions to the hierarchy is used when a manager becomes overloaded by hierarchical referral or problems arise in the chain of command. Positions such as "assistant to" or another level may be added. This mechanism reflects growth and increasing complexity, tends to reduce the span of control, thus allowing more communication and closer supervision.
	Formal management information system	It includes periodic reports, written information, and computer-based communications distributed to managers. Electronic mail systems allow managers and employees greater access to one another without having to be in the same place at the same time or even connected by telephone. Information systems make communication up and down the hierarchy more efficient.
Horizontal linkages	Cross-functional information system	Computerized information systems can enable managers or frontline workers throughout the organization to routinely exchange information about problems, opportunities, activities, or decisions. Employees also use it to build relationships all across the organization, aiming to support and enhance ongoing horizontal coordination across projects and geographical boundaries. A database makes it easy for employees working across borders to seek each other out, share ideas and information, and build enduring horizontal connections.
	Liaison roles	A liaison role is created when a person in one department or area of an organization has the responsibility for coordinating it with another department. Liaison roles often exist between engineering and manufacturing departments because engineering has to develop and test products to fit the limitations of manufacturing facilities. Another approach is to locate people close together so they will have direct contact on a regular basis. Liaison roles usually link only two departments.
	Task forces	A task force is a temporary committee composed of representatives from each organizational unit affected by a problem. Each member represents the interest of a department or division and can

		carry information from the meeting back to that department. It is an effective device for temporary issues. It solves problems by direct horizontal coordination and reduces the information load on the vertical hierarchy. Typically, it is disbanded after its task is accomplished.
	Integrator positions	They include a full time integrator position or department solely for the purpose of coordination. A full time integrator frequently has a title, such as product manager, project manager etc. He or she doesn't report to one of the functional departments being coordinated (like the liaison person), but is located outside the departments and has the responsibility for coordinating several departments. The integrator can also be responsible for an innovation or change project. He or she does not have formal authority over team members with respect to giving pay raises, hiring or firing. Formal authority rests with the managers of the functional departments. An integrator has to use expertise and persuasion to achieve coordination. He or she spans the boundary between departments and must be able to get people together, maintain their trust, confront problems, and resolve conflicts and disputes in the interest of the organization.
	Teams	They are permanent task forces and are often used in conjunction with a full -time integrator. It is the strongest method of horizontal integration. Special project teams may be used when organizations have a large-scale project, a major innovation, or a new product line. Here, there is also a virtual team that is made up of organizationally or geographically dispersed members who are linked primarily through advanced information and communications technologies. Members frequently use the Internet and collaborative software to work together, rather than meet face to face.

Source: based on: J.R. Galbraith: *Designing Organizations: An Executive Briefing on Strategy, Structure, and Process*, Jossey-Bass, San Francisco 2001; J.R. Galbraith, D. Downey, A. Kates: *Designing Dynamic Organizations: A Hands-On Guide for Leaders at All Levels*, AMACOM 2001; J.R. Galbraith, D. Downey, A. Kates: *How Networks Undergird the Lateral Capability of an Organization – Where the Work Gets Done*, Journal of Organizational Excellence, Spring 2002, p. 67-78; W.J. Altier: Task Forces: An Effective Management Tool", Management Review, February 1987, p. 52-57; A.M. Townsend, S.M. DeMarie, A.R. Hendrickson: *Virtual Teams: Technology and the Workplace of the Future*, Academy of Management Executive 12, no. 3/1998, p. 17-29

The use of these linkage mechanisms varies from organization to organization, as well as within different areas of the same organization. In general, the taller the organization, the more vertical integration mechanisms are needed, as the chains of command and communication are longer. Additional length requires more linkages to minimize the potential for misunderstandings and miscommunications. In turn, the flatter the organization is, the more necessary horizontal integration mechanisms are.

2.5. Formalization

Another essential criterion in the design of organization structure, beside specialization, configuration, centralization, and coordination, is the extent to which polices and procedures are formalized. **Formalization** refers to rules, procedures, and written documentation, such as policy manuals and job descriptions that prescribe the rights and duties of employees. An organization structure described as highly formalized would be one with rules and procedures to prescribe what each individual should be doing.[78] Such organizations have written standard operating procedures, specified directives, and explicit policy. In highly formal organizations there are penalties for breaking rules.

Formalization is low if there does not exist a set of written or accepted strict rules or codes of conduct. Where formalization is low, there is high variance and hence flexibility, in the methods and procedures used to govern the organization's work. Rules are likely to change over time and vary across circumstances. In the extreme, an organization with no formalization is chaotic, and an organization with very high formalization is bureaucratic and stifling creativity.[79]

In terms of the four design decisions, formalization is the result of high specialization of labour, high delegation of authority, the use of functional departments, and wide spans of control:[80]

- high specialization of labour is amenable to the development of written work rules and procedures. Jobs are so specialized as to leave little to the discretion of the jobholder;
- high delegation of authority creates the need of checks on its use. Consequently, the organization writes guidelines for decision making and insists upon reports describing the use of authority;
- functional departments are made up of jobs with great similarities. This principle brings together jobs that make up an occupation such as accountants, engineers, and mechanists. Because of the similarity of the

[78] R.W. Hetherington: *The Effects of Formalization on Departments of a Multi – Hospital System*, Journal of management Studies, March 1991, p. 103-141
[79] R.M. Burton, G. DeSanctis, B. Obel, *Organizational Design*…..op.cit., p.160
[80] J.M. Ivancevich, M.T. Matteson: *Organizational*… op.cit., p. 583-584

jobs and the rather straightforward nature of the department's activities, management can develop written documents to govern those activities;

- a wide span of control discourages one-to-one supervision. There are simply too many subordinates for managers to keep up with on a one-to-one basis. Consequently, managers require written reports to inform them. Although formalization is defined in terms of written rules and procedures, it is important to understand how they are viewed by the employees. Some organizations have all the appearances of formalization, complete with thick manuals of rules, procedures, and policies, yet employees do not perceive them as affecting their behaviour. Thus, where rules and procedures exist, they must be enforced if they are to affect behaviour.

Evidence supports the conclusion that large organizations are more formalized. The reason is that large organizations rely on rules, procedures, and paperwork to achieve standardization and control across their large numbers of employees and departments, whereas top managers can use personal observation to control a small organization.[81]

The basic advantage of formalization is an increased uniformity and predictability of people's actions and the possibility to coordinate them for the attainment of common goals. On the other hand, the greatest disadvantage of formalization is thought to be the limitation of the organization's flexibility. Other shortcomings following from formalization include: triumph of form over content, excessive specialization and centralization, and the degradation of the individual. A high or low level of formalization may be favourable in circumstances described in Table 2.5.

Table 2.5. Advantages and disadvantages of formalization

High level of formalization	a not very volatile environment and, consequently, repeatability and routinization of transformation processes
	the necessity to standardize the actions of members of the organization on a large scale and in a situation of a substantial territorial dispersion
	technological requirements that limit the arbitrariness of human behaviour
	low qualifications of members of the organization
Low level of formalization	a complex and volatile environment requiring a flexible and individualized response of the organization as a whole, and response of its particular members
	non-routinized technology that changes depending on changing tasks
	high qualifications and an active attitude of members of the organization

Source: based on M. Bielski: *Organizacje, istota, struktury, procesy*, Wydawnictwo Uniwersytetu Łódzkiego, Łódź 1997, p. 204-205

[81] R.L. Daft: *Understanding the Theory and Design of Organizations*, Thomson South- Western, United Kingdom 2007, p. 486

The level of formalization of an organization should change over time, that is, it should be adjusted to the current needs in the company's environment and its internal functioning. Nowadays, most organizations operate somewhere in between, with relatively high or relatively low formalization.

2.6. Structural Alignment

Each type of structure is applied in different situations and meets different needs. Through establishing a desired level of each structural design dimension (specialization, configuration, centralization, coordination and formalization) on a high or low level, managers shape the organizational structure.

An organization that is highly specialized, centralized, formalized, complex, and has a tall hierarchy of authority is said to be bureaucratic. Bureaucracies are not bad in themselves, although, they are often tainted by abuse and red tape. An organization that is on the opposite end of each of these continua is very flexible and loose. Control is very hard to implement and maintain in such an organization, but at certain times this model of organization may be appropriate.[82]

Ultimately, the most important decision that managers make about structural design is to find the right balance between vertical control and horizontal coordination, depending on the needs of the organization. Vertical control is associated with goals of efficiency and stability, while horizontal coordination is associated with learning, innovation and flexibility. Figure 2.1. shows a simplified continuum that illustrates how structural approaches are associated with vertical control versus horizontal coordination.

A functional structure is appropriate when the organization needs to be coordinated through a vertical hierarchy and when efficiency is important for meeting organizational goals. A functional structure uses task specialization and a strict chain of command to ensure the efficient use of scarce resources, but it does not enable the organization to be flexible or innovative. At the other extreme, a horizontal structure is appropriate when the organization has a high need for coordination of functions to achieve innovation and promote learning. A horizontal structure enables organizations to differentiate themselves and respond quickly to changes, but at the expense of efficient resource use. A virtual network structure offers even greater flexibility and potential for rapid response by allowing the organization to add or subtract pieces as needed to adapt and meet changing needs from the environment and marketplace.

In addition, many organizations use a hybrid structure to combine characteristics of these structural types. Types of organizational structure are discussed in the next chapter.

[82] D.L. Nelson, J.C. Quick: *Understanding* …..op.cit., p.423

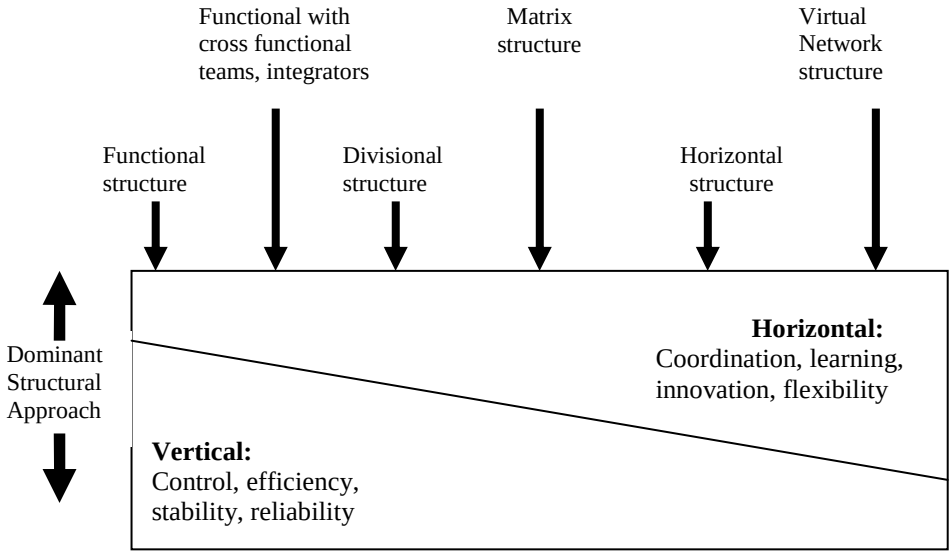

Figure 2.1. Relationship of structure to an organization's need for efficiency versus learning

Source: R.L. Daft: *Understanding the Theory and Design of Organizations*, Thomson South- Western, United Kingdom 2007, p.223

An interesting approach to organizational design including both conceptual variables and design dimensions is presented by R.M. Burton, G. DeSanctis and B. Obel.[83] They propose five steps of organizational design, such as:

- **step 1 – goals** – specific in terms of efficiency (focus on inputs, use of resources and cost) and effectiveness (focus more on outputs, products or services, and revenues);
- **step 2 – strategy and environment** – a description of **strategy** in terms of the degree of exploration (search, variation, risk taking, and innovation by the firm) and exploitation (refinement, efficiency, selection, and implementation by the firm). These strategies are categorized as: reactor (a strategy that lacks an intentional strategy toward innovation; it makes adjustments when forced or when there is an urgent need or problem), defender (a strategy that focuses on exploitation and innovation only in narrow, limited areas), analyzer without innovation (a strategy that is similar to a defender but with more emphasis on exploration), analyzer with innovation (a strategy that is similar to prospector but with more emphasis on exploitation) and prospector (a strategy that takes an aggressive approach to innovation,

[83] R.M. Burton, G. DeSanctis, B. Obel, *Organizational Design*…. op.cit.

systematically searching for new opportunities. It regularly experiments with change). Another variable is the **environment,** which is defined in terms of the degree of complexity and unpredictability. This leads to there being four types of environment: a calm environment (with low complexity and low unpredictability), a varied environment (with high complexity and low unpredictability, a locally stormy environment (with low complexity and high unpredictability), and a turbulent environment (with high complexity and high unpredictability);

- **step 3** – **structure** – determined by:
  - **configuration-** defined in terms of organizing assignment of subtasks and coordinating relationships between them. Considering the basic configurations: product/service/customer orientation and functional specialization there are four configurations: simple (tasks or activities are specified on an ongoing basis rather than in advance; an organization where one individual, the boss, is responsible for all activities), functional (tasks are assigned by specialization of work; tasks are grouped by skill requirements), divisional (tasks are assigned to relatively independent divisional units by product, customer, region; or other externally orientated focus; each division is relatively self contained; executives make policy and financial decisions), and matrix (a combination of a functional and divisional form; a dual focus; a dual hierarchy)
  - **complexity** – defined in terms of horizontal differentiation (the degree of task specialization across the hierarchy) and vertical differentiation (the depth of the hierarchy; total number of levels, top to bottom). Considering these two factors there are four complexity types: blob (an undefined organization in the sense that there are no formally specified subunits), tall (a large number of levels from bottom to top; low horizontal differentiation and high vertical differentiation), flat (many jobs at the bottom and few levels bottom to top; high horizontal differentiation and low vertical differentiation), and symmetric (a balance of specific jobs and levels; neither tall nor flat; high on both horizontal and vertical differentiation);
  - **geographic distribution** – defined in terms of optimum sourcing (the decision to locate operations in a place in the word that brings the greatest advantage to the firm in terms of customer contact, cost efficiency, human resource skills, or other objectives) and locally responsive (the decision to distribute work in many locales versus consolidating work in a centralized location). Considering these two factors there are four geographic kinds of distribution: global, international, multi-domestic and transnational;
  - **knowledge exchange** – defined in terms of IT infusion (the extent to which an organization relies on information technology, including data processing and a computer-based communication system to support knowledge exchange) and virtualization (the degree of

boundary – spanning, that a firm uses as a basis for knowledge exchange). Considering these two factors, there are four structures for managing knowledge exchange: ad hoc communications (virtualization and IT infusion are low), informated (virtualization is low and IT infusion is high), cellular (virtualization is high and IT infusion is low), and network (virtualization and IT infusion are high);

- **step 4** – **process and people** – the determination of task repetitiveness and divisibility gives rise to identifying four task design spaces: orderly (work is organized in a way that is highly divisible and highly repetitive; usually requires relatively little coordination among subtasks), complicated (work is organized in a way that is not very divisible but highly repetitive; usually requires a high degree of coordination among subtasks), fragmented (work is organized to be highly divisible but not repetitive; usually requires less coordination compared to complicated task design), and knotty (work is organized in a way that is neither divisible nor repetitive; usually requires not only coordination among subtasks but also support for the non-repetitive nature of subtasks). **People** are defined by their number and professionalization. There are four people spaces: shop (few people who are not highly skilled), factory (many people who have low skills), laboratory (few people, where each one has high professionalization or a high level of skill), and office (many people with high professionalization). Leadership and organizational culture are connected with people. **Leadership style** is defined by uncertainty avoidance and preference for delegation. According to these two criteria, there are four the leadership style spaces: maestro (top management orchestrates the work of others through a combination of direct involvement and high tolerance for uncertainty), manager (top management prefers little delegation and avoids uncertainty – similar to theory X), leader (top management prefers delegation and accepts uncertainty - similar to theory Y), and producer (top management avoids uncertainty and has a high preference for delegation). **Organizational culture** is defined by tension (the degree to which there is a sense of stress or a psychological "edge" in the work atmosphere) and readiness to change. There are four the climate spaces: group (low tension and low readiness to change), internal process (high tension and low readiness to change), developmental (low tension and high readiness to change), and rational goal (high tension and high readiness to change);
- **step 5** – coordination and control – defined by decentralization and formalization. There are four coordination and control spaces: family (rely on informal and centralized means of control), machine (rely on formal and centralized means of control), market (rely on informal and decentralized means of control), and clan or mosaic (rely on high formalization and high decentralization). In addition to coordination and control, **information system** is a vital component. It is defined by the

amount of information and the tacit nature of information. These two dimensions create four information system spaces: event-driven, data-driven, people-driven and relationship-driven. The last component in this step is an **incentive system** defined by the target of incentives (choice of whether to base incentives on individual or group work) and basis of evaluation results (choice of whether to base incentives on behaviour or results). These two dimensions create four incentive system design spaces: personal pay (rewards are based on behaviour evaluation as executed by an individual), skill pay (rewards are based on behaviour evaluation as executed by the particular group of people within the unit of analysis), bonus based pay (rewards are based on results evaluation as executed by an individual), and profit sharing (rewards are based on results evaluation as executed by a group of people within the unit of analysis).

Table 2.6 shows fit and misfit for all of these structural dimensions.

Table 2.6. Fit and misfit for structural dimensions by R.M. Burton, G. DeSanctis i B. Obel.

Design space	**Organizational Model**			
	A	**B**	**C**	**D**
Goals	Neither	exploit and efficiency	explore and effectiveness	exploit and efficiency or explore and effectiveness
Strategy types	reactor	defender	prospector	analyzer with innovation or analyzer without innovation
Environment	calm	varied	locally stormy	turbulent
Configuration	simple	functional	divisional	matrix
Organizational complexity	blob	tall	flat	symmetric
Geographic distribution	global	international	multi-domestic	transnational
Knowledge exchange	ad hoc communication	informated	cellular	network
Task design	orderly	complicated	fragmented	knotty
People	shop	factory	laboratory	office
Leadership	maestro	manager	leader	producer
Organizational culture	group	Internal process	developmental	rational goal
Coordination and control	family	machine	market	clan /mosaic

Information system	event-driven	data-driven	people-driven	relationship-driven
Incentives	personal pay	skill pay	bonus pay	profit sharing

Source: R.M. Burton, G. DeSanctis, B. Obel, *Organizational Design. A Step-by-Step Approach*, Cambridge University Press, Cambridge 2006, p.194

The mutual adjustment of the design spaces described by the authors is presented in columns A, B, C, and D. However, it needs to be stressed that the listed types have a model character, and the real number of intermediary states between these extremes is unlimited. Every organization should adjust these characteristics to its individual needs.

3. TYPOLOGY OF ORGANIZATIONAL STRUCTURES

3.1 Traditional Organizational Structures

The person who was a precursor of research into organizational structures was Max Weber, the author of bureaucracy theory. Bureaucracy is a form of organization based on logic, order, and the legitimate use of formal authority. Max Weber described an "ideal" form, according to which bureaucracies are supposed to be orderly, fair, and highly efficient. The bureaucratic features of organizations include:[84]

- a clear-cut division of labour;
- a strict hierarchy of authority;
- staffing by technical competency,
- formal rules and procedures
- an impersonal approach to decision making.

Bureaucracies can be too rigid and formal. By relying heavily on rules and procedures, they can be slow to respond to rapidly changing and uncertain environments. Such organizations can also become unwieldy as they grow large. Too many levels in the hierarchy of authority can cause higher managers to lose touch with lower level operations. Overspecialization of jobs can reduce employee initiative and creativity as workers conform to rules instead of reaching out in new directions.

A particular object of interest of the classics of organization was the workplace and work as a form of activity. They were examined in terms of work efficiency, which was supposed to be mostly dependent on the individual's characteristics and work conditions. A significant contribution in this respect was made by F.W. Taylor[85] and his scientific management theory, which demanded detailed observation and measurement of even the most routine work in order to find the best way to do it. Taylor advocated a style of management that divided work in such a way that every worker, from the director to the lowest managerial position, would have the least possible number of various activities to perform, which is termed functional structure. According to Taylor,

[84] M.Weber: *The Theory of Social and Economic Organization*, William Hodge and Company Limited, London 1947

[85] F.W. Taylor: *Scientific Management*, Harpers & Brothers, New York 1947

the separation of executive from management work leads to the latter being linked into one body – an organization office.

A classical account of the development of organization structure was also given by H. Fayol[86], who described its two stages:

- the owner is himself a worker;
- the owner employs workers, which brings about the division of functions into two areas: management and executive;
- intermediary levels of management are formed;
- with an increase in the number of workers, the positions of foremen and managers are created;
- a further increase in the number of workers requires managerial qualifications, which makes it necessary to appoint department managers;
- the number of levels in the hierarchy increases with the number of workers, and every manager has no more than four to five immediate subordinates;
- the number of levels continually increases up to eight or nine.

Consequently, the development of a company leads to the creation of "offices-factories", i.e. permanent, exact and strong administration.

To summarize, the classic approach to organization perceives it is a rational being designed to realize its creator's objectives. It needs to be remarked that this rationality has a narrower, technical meaning. The basic structural category is division of work and specialization, as well as hierarchy understood as the issue of superiority and subordination, and not only the issue of superiority and inferiority of objectives and tasks in organized group activity. The principal means to ensure the integration of individual activities with the organization's objectives is formalization. Furthermore, due to procedural coordination, there is created a set of abstract, more or less lasting relations that govern the behaviour of each member of the organization. The result of the classics' work was the elaboration of a conception of organization structure compatible with the requirements of a stable environment. In such a slender, formalized and decentralized organization structure (mechanical structure), the focus is on precision, durability, reliability, and discipline, which inevitably lead to the impersonalization and rigidity of the structure.[87] Examples of (classical) hierarchic structures include:

- entrepreneurial (line, simple) structure;
- functional structure;
- line and staff structure.

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[86] H. Fayol: *Administracja przemysłowa i ogólna,* Wydawnictwo INOiK, Poznań 1947

[87] A. Zakrzewska – Bielawska: *Struktura organizacyjna przedsiębiorstwa w ujęciu klasycznym, współczesnym i przyszłym* in: *„Tradycja i współczesność w metodologicznym nurcie zarządzania*" J. Czekaj (ed), Wydawnictwo Akademii Ekonomicznej w Krakowie, Kraków 2007, s. 27-37.

The entrepreneurial (line, simple) structure, built around the owner/manager and typically utilized by small companies in the early stages of their development is illustrated in Figure 3.1. It is a structure where the arrangement of tasks, responsibilities, and communication is highly informal and accomplished through direct supervision. Because the scope of the firm's activities is modest, there is little need to formalize roles, communication, and procedures. It can also allow for a rapid response to product/market shifts and the ability to accommodate unique customer demands without major coordination difficulties. A simple structure encourages employees to multitask, and they are efficacious in a business that serves a simple, local product/market or a narrow niche.

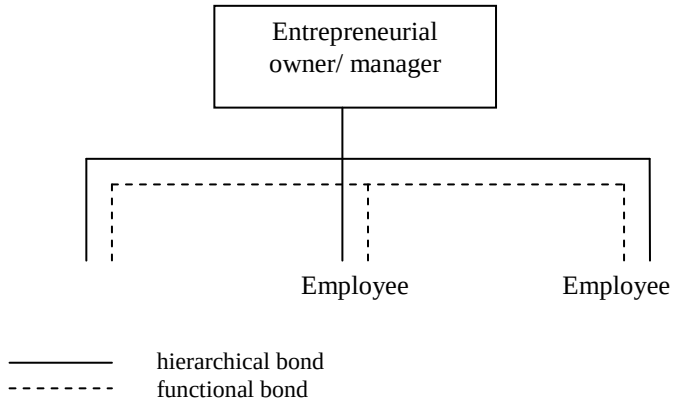

Figure 3.1. The entrepreneurial (line, simple) structure

Its advantages and disadvantages are summarized in Table 3.1.

Table 3.1. Advantages and disadvantages of the entrepreneurial (simple) structure

Advantages	Disadvantages
• enables the founder, who, logically, understands the business, to control its early growth and development, • uniformity of management and ease of maintaining discipline, • clear determination of the scope of tasks, rights, and responsibilities, • fast decision-making, • superiors' and subordinates' sense of confidence and stability, • efficient flow of information	• the founder may not have sufficient specialist knowledge in certain areas • substantial management centralization, • low flexibility, • omitting the principle of specialization • tendency for bureaucracy

Source: based on: P. J. Montana, B. H. Charnov*: Management*, 3rd edition, Barron's Educational Series, 2000, D. R. Moore*: Project Management: Designing Effective Organizational Structures in Construction*, Blackwell Pub. 2002; S. Lachiewicz, H. Zdrajkowska: *Struktury organizacyjne* in *Organizacja pracy kierowniczej*, S. Lachiewicz (ed.) Absolwent, Łódź 1994

The functional structure, illustrated in figure 3.2., is commonplace in small firms which have outgrown the entrepreneurial structure and in larger firms which produce only a limited range of related products and services. It is also the typical internal structure of the divisions and business units which comprise larger diversified organizations. It is more suitable in a stable environment than a turbulent one, as it is generally centralized with corporate and competitive strategies again being substantially controlled by the strategic leader. It is a structure in which the tasks, people and technologies necessary to do the work of the business are divided into separate "functional" groups (e.g. marketing, operations, finance) with increasingly formal procedures for coordinating and integrating their activities to provide the business's products and services.

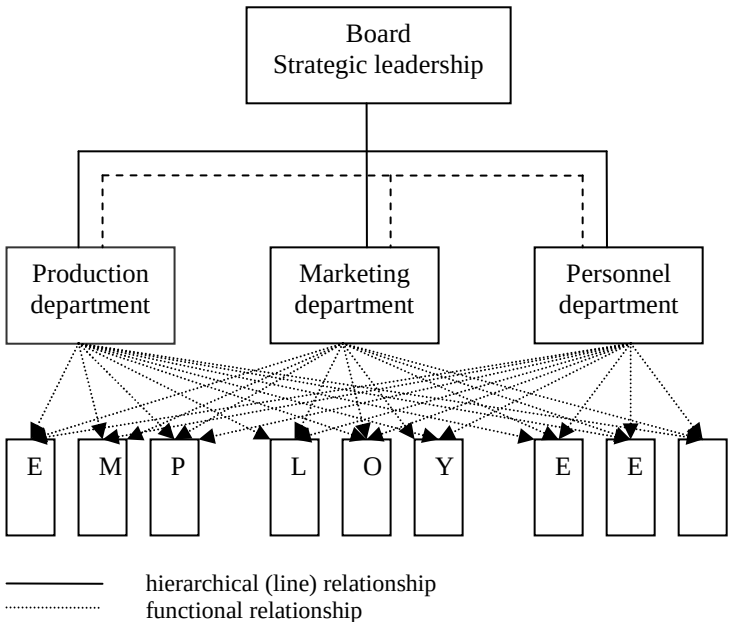

Figure 3.2. The functional structure

Advantages and disadvantages are summarized in table 3.2.

Table 3.2. Advantages and disadvantages of the functional structure

Advantages	Disadvantages
• achieves efficiency through specialization, • develops functional expertise, • differentiates and delegates day-to-day operating decisions, • retains centralized control of strategic decisions, • tightly links structure to strategy by designating key activities as separate units	• competence disputes and occasionally issuing contradictory orders, • a complicated communication network, • promotes narrow specialization and functional rivalry and conflict, • creates difficulties in functional coordination and interfunctional decision making, • functional specialists may seek to build mini -empires

Source: based on: D. R. Moore: *Project Management: Designing Effective Organizational Structures in Construction*, Blackwell Pub. 2002; Bielski M.: *Organizacje. Istota, struktury, procesy*, Wydawnictwo Uniwersytetu Łódzkiego, Łódź 1997; Thompson A.A., Strickland A.J.: *Strategic Management – Concepts and Cases*, Irwin Homewood, IL, Boston 1992

The line and staff structure (Figure 3.3.) is a structure in which staff specialists are added to a line organization to advise, serve or support the line in some manner. These specialists contribute to the effectiveness and efficiency of the organization. Their authority is generally limited to making recommendations to the line organization. Sometimes this creates conflict. However such conflict can be reduced by having staff specialists obtain some line experience, which will tend to make them better understand the problems facing the line managers they support. The line-and-staff structure generally has a centralized chain of command. Line-and-staff managers have direct authority over their subordinates, but staff managers have no authority over line managers and their subordinates. Because there are more layers and presumably more guidelines to follow in this type of organization, the decision-making process is slower than in a line organization. The line-and-staff organizational structure is generally more formal in nature and has many departments.

Advantages and disadvantages are summarized in table 3.3.

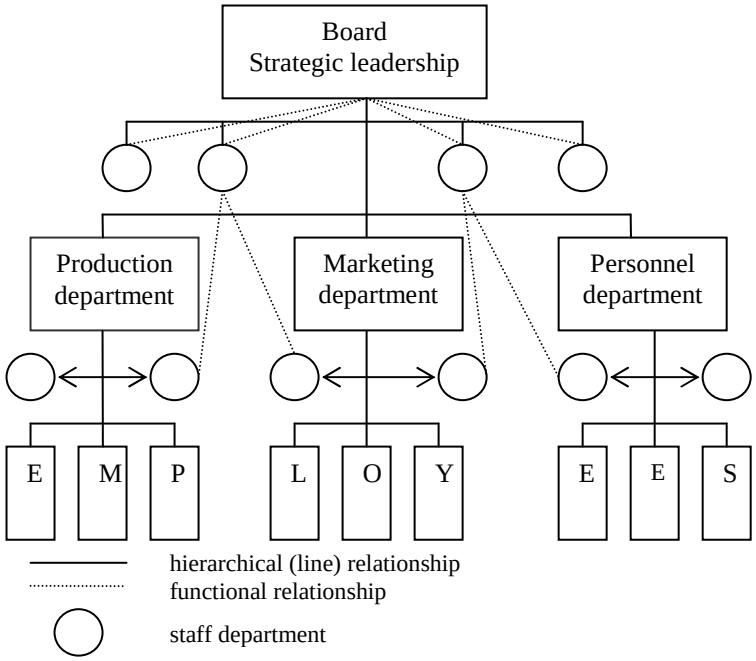

Figure 3.3. The line and staff structure

Table 3.3. Advantages and disadvantages of the line and staff structure

Advantages	Disadvantages
• preservation of management uniformity and responsibility, • greater efficiency and correctness of managers' decisions, • making use of experts' opinions, • simplicity and clarity of construction,	• threat of the occurrence of conflicts between line and staff, • tendency for making staff units autonomous, • line units may over- or underestimate the advice and opinions formulated by staff units

Source: based on: P. J. Montana, B. H. Charnov: *Management*, 3rd edition, Barron's Educational Series, 2000, D. R. Moore: *Project Management: Designing Effective Organizational Structures in Construction*, Blackwell Pub. 2002; S. Lachiewicz, H. Zdrajkowska: *Struktury organizacyjne* in *Organizacja pracy kierowniczej*, S. Lachiewicz (ed.) Absolwent, Łódź 1994

The classics were convinced that there existed an ideal, universal structural form. However, with the increasingly complex environment and appreciation of the role of people in organizations, theories of organizational structure also changed and more organic and flexible forms were created.

3.2. Organizational Structures according to Mintzberg

Two approaches to the analysis of organizational structures that have been put forward in recent years are those of Handy and Mintzberg. Handy, analyzing organizations in terms of their cultures, identified four structures that supported them. These four structures are imaginatively described as follows:[88]

- **the web structure**, where power is centralized in the hands of a few key individuals, and which is suited to small organizations;
- **the Greek temple**, which is based on functional specialisms and defined roles, and is generally seen as a bureaucracy;
- **the net**, which is essentially a matrix organization, in which project teams are coordinated by line and functional units, and where the emphasis is on the task;
- **the cluster, or galaxy**, which is constructed around relatively independent and self-supporting individuals, such as in professional practice of some kind (doctors, architects, accountants, etc).

In practice, it is likely that organizations will comprise of more than one of the above-mentioned models, even though one may be dominant.

In a less imaginative but more pragmatic manner, Mintzberg[89] developed his rational concept of an organization as composed of five segments (Figure 3.4.), summarized as follows:

- "operating core" – refers to those employees who carry out the various tasks related to the primary activities of the value chain, which include securing inputs, transforming the inputs into outputs by adding value and then distributing the outputs;
- "strategic apex" – a strategic leader and his or her colleagues who are responsible for developing the corporate strategy, managing relations with the environment, designing the structure, and allocating resources;
- "middle line" – middle managers, with authority, link the strategic apex with the operating core. They manage the tasks carried out by the operating core, applying the policies and system established by the strategic apex, and feed information up and down the organization;
- "support staff" – support activities occur at various levels in the hierarchy and provide assistance to both middle managers and the operating core. Such activities would include research and development, public relations and certain aspects of the personnel function such as running the payroll;
- "technostructure" – comprises of analysts who affect the work of others, such as work study analysts, planners, and training and recruitment staff.

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[88] Ch. B. Handy: *Understanding Organizations*, 4th edition, Penguin Business, London 1993, p.32 and next

[89] H. Mintzberg: *Structure in Fives: Designing Effective Organizations*, Prentice Hall, *Englewood Cliffs* 1983

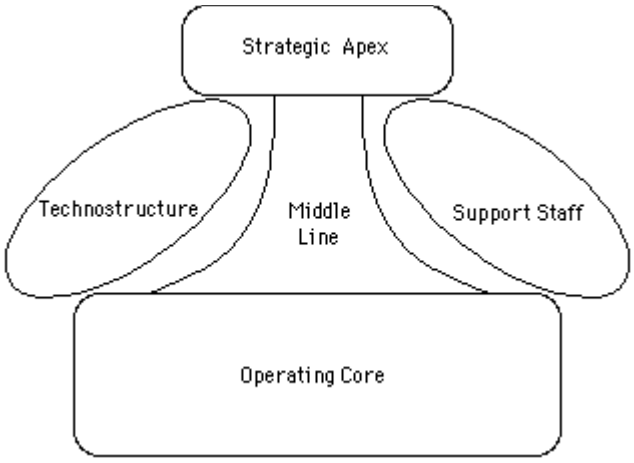

Figure 3.4. The basic parts of organizations – the Mintzberg model

Source: H. Mintzberg, J. B. Quinn: *The Strategy Process, Concepts and Contexts*, Prentice Hall, New Jersey 1992, p.158

Mintzberg's model looks, on the surface, as if it was a hierarchical model associated with bureaucracy, but he uses it flexibly to develop five different configurations of structure. His synthesis of research into organizations produces a set of five clusters, or configurations, that provide the focal points of the study of organizations. These configurations reduce the separate influences of key organizational features into manageable concepts that can be used in the study of organizations. In Mintzberg's own words "*In each structural configuration, a different coordinating mechanism is dominant, a different part of the organization plays the most important role, and a different type of decentralization is used*". The five configurations are as follows:

1. **Simple structure** is a type of organization with little technical and support staff, strong centralization of decision making in the upper echelon, and a minimal middle level. This structure has a minimum of vertical differentiation of authority and minimal formalization. It achieves coordination through direct supervision, often by the chief executive in the upper echelon. It is very closely related to the entrepreneurial structure;
2. **Machine Bureaucracy** is a type of organization with well-defined technical and support staff differentiated from the line operations of the organization, limited horizontal decentralization of decision making, and a well-defined hierarchy of authority. This type of organization is generally found where work is routine, with standardized production processes. Jobs are tightly defined and regulated, and there is a powerful technostructure to search for efficiencies and cost control opportunities. There is strong formalization through policies, procedures, rules, and

regulations. Coordination is achieved through the standardization of the work processes. A machine bureaucracy is relatively slow to change, and therefore more suitable for stable environmental conditions. In a number of respects it is similar to the functional structure;

3. **Professional Bureaucracy** emphasizes the expertise of professionals in the operating core of the organization. Technical and support staff serve the professionals. There is both vertical and horizontal differentiation, and coordination is achieved through the standardization of the professionals' skills. It is bureaucratic but not centralized, and power lies with expert professionals and professional managers;
4. **Divisionalized Structure** is a loosely coupled, composite structural configuration. It is a configuration composed of divisions, each of which may have its own structural configuration. Each division is designed to respond to the market in which it operates. There is vertical decentralization from the upper echelon to the middle of the organization, and the middle level of management is the key part of the organization. Division will be expected to agree objectives and targets with the strategic leader; and measures of effective performance related to these will be used for monitoring and control purposes, hence the standardization of outputs is the most appropriate coordination mechanism. This form of organization may have one division that is machine bureaucracy, one that is an adhocracy, and one that is a simple structure;
5. **Adhocracy** is a highly organic, rather mechanistic, configuration with minimal formalization and order. It is designed to fuse interdisciplinary experts into smoothly functioning ad hoc project teams. Liaison devices are the primary mechanism for integrating project teams through the process of mutual adjustment. There is a high degree of horizontal specialization based on formal training and expertise. Selective decentralization of project teams occurs within adhocracy. Adaptive strategic changes, originating anywhere within the organization, are likely to be commonplace and encouraged as this configuration attempts to deal with a complex and dynamic environment.

Table 3.4. summarizes the prime coordinating mechanism, the key parts of an organization, and a type of decentralization for each of these structural configurations.

Table 3.4. Selected features of Mintzberg's five configurations

Features	**Simple structure**	**Machine Bureaucracy**	**Professional Bureaucracy**
Prime coordinating mechanism	direct supervision	standardization of work processes	standardization of skills
Key part of organization	strategic apex	technostructure	operating core
Type of decentralization	centralization	limited horizontal decentralization	vertical and horizontal decentralization
Age/size	young, small	old, large	variously
Technology	simple	simple and regulated	simple, non-regulated
Environment	simple and dynamic	simple and stable	complex and stable
Power and values	controlled by strategic leader-possibly owner/ manager	technocratic and sometimes external control	professional manager control
	Divisionalized Structure	**Adhocracy**	
Prime coordinating mechanism	standardization of outputs	mutual adjustment	
Key part of organization	middle management	support staff	
Type of decentralization	limited vertical decentralization	selective decentralization	
Age / size	old, large	young	
Technology	divisible	subtle, often automated	
Environment	relatively simple and stable but diverse	complex and dynamic	
Power and values	middle management control, i.e. general managers	expert control	

Source: H. Mintzberg: *Structure in Fives: Designing Effective Organizations*, Prentice Hall, *Englewood Cliffs* 1983, p. 280-281

The above-mentioned five structural configurations explain the fact why organizations decide to change their structures. A company with a simple structure will evolve towards machine bureaucracy as it grows and becomes older. Adhocracy may gradually transform into professional bureaucracy (if there is a tendency to stabilize the operations in the organization). Nevertheless, these configurations still remain in the domain of classical organizational solutions.

3.3. Alternative Organizational Structures

There are a number of different alternative organizational structures besides classical structures and Mintzberg's configurations. The basic organization structures formed in the course of the development of the science of management include:

- divisional structure,
- holding company structure,
- team based structure,
- matrix structure,
- tensor structure,
- hybrid structure.

The divisional structure is one in which a set of relatively autonomous units, or divisions, are governed by a central corporate office but where each operating division has its own functional specialists who provide products or services different from those of other divisions. Within this structure, divisions can be organized according to individual products, services, geographic regions, customers, product groups, major projects or programs, businesses, or profit centres. A divisional structure promotes flexibility because each unit is relatively small and can adopt to the needs of its environment. Moreover, this structure decentralizes decision making, because the lines of authority converge at a lower level in the hierarchy. Each division is headed by a general manager who is responsible for strategy implementation and to some extent strategy formulation within the division. This structure is excellent for achieving coordination across functional departments. It works well when an organization can no longer be adequately controlled through the traditional vertical hierarchy, and when goals are orientated toward adaptation and change.

An example of the divisional structure is illustrated in Figure 3.5., using product groups as the means of divisionalizing.

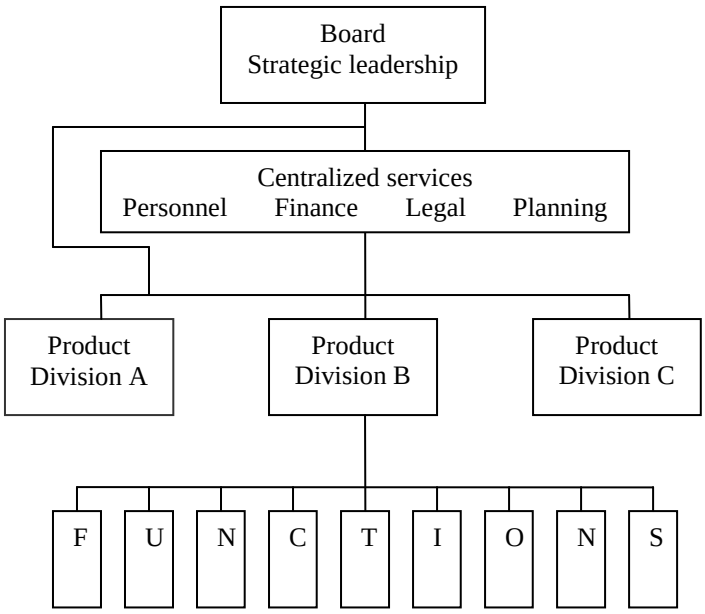

Figure 3.5. The divisional structure

Advantages and disadvantages are summarized in table 3.5.

Table 3.5. Advantages and disadvantages of the divisional structure

Advantages	Disadvantages
• suited to fast change in an unstable environment • leads to customer satisfaction because product responsibility and contact points are clear • involves high coordination across functions • allows units to adopt to differences in products, regions, customers • best in large organizations with several products • decentralizes decision making	• eliminates economies of scale in functional departments • leads to poor coordination across product lines • eliminates in depth competence and technical specialization • makes integration and standardization across product lines difficult • divisions may tend to think short term and concentrate on profits • divisions may be of different sizes and some may grow very large

Source: based on: Daft L.R.: *Understanding the Theory and Design of Organizations*, Thomson South- Western, United Kingdom 2007; Nalepka A., Kozina A.: *Podstawy badania struktury organizacyjnej*, Wydawnictwo Akademii Ekonomicznej w Krakowie, Kraków 2007; Schermerborn J.R. Jr.: *Management for Productivity*, 4th edition, John Wily & Sons, Inc., Toronto 1993

The holding company structure, illustrated in Figure 3.6., is ideal for diversified conglomerates where there are few interdependencies between the businesses. The small head office acts largely as an investment company, acquiring and selling businesses and investing money as appropriate. The subsidiaries, which may or may not be wholly owned, are very independent, and their general managers are likely to have full responsibility for the corporate strategy within any financial constraints on targets set by headquarters. It is quite common to find that subsidiaries operate under individual names rather than the name of the parent organization, especially if they are acquisitions which may at any time be sold again. The holding company structure is particularly appropriate for companies pursuing restructuring strategies, buying, rationalizing and then selling businesses when they can no longer add further value.

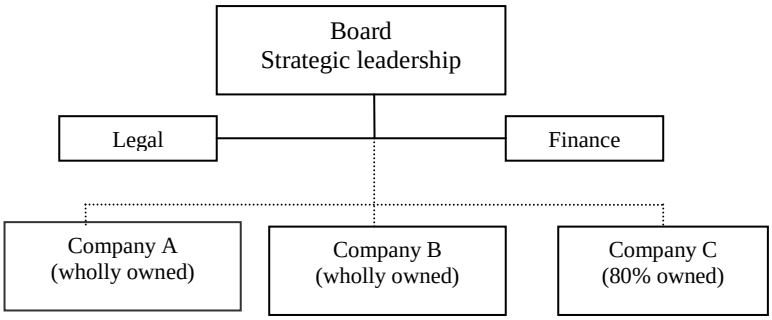

Figure 3.6. The holding company structure

Its advantages and disadvantages are summarized in table 3.6.

Table 3.6. Advantages and disadvantages of the holding company structure

Advantages	Disadvantages
• low central overheads • holding company able to finance subsidiaries at favorable cost of capital • spreads risk and allows for cross – subsidization between most and least profitable businesses • facilities acquisition, divestment and decentralization	• individual companies may feel threatened and perpetually "for sale" • no centralized skills to support the businesses • no synergy • possible lack of group identity and hence difficulties of control – corporate strategy may not seem coherent

Source: based on: Thompson J.L.: *Strategic Management. Awareness and Change*, 2nd edition, Chapman & Hall, London 1993; Salaman G.: *Understanding Business: Organizations*, Routledge, 2001

The team based structure (shown in Figure 3.7) seeks to simplify and amplify the focus of resources on a narrow but strategically important product, project, customer, or innovation. In this structure, specialists from different domains work together to complete projects. Although sometimes teams are self-

managed, generally a team leader is appointed by a higher level of management. When a team's task consists of projects rather than ongoing activities, the team typically disbands after a project is completed and its members move on to other projects. An organization in which a temporary team structure is dominant is called an adhocracy. The adhocracy form of organization has been developed to simultaneously deal with coordination problems associated with intraorganizational specialization and the requirement for quick responses associated with fast changing environments. Not all team-based organizations are adhocracies. The term refers specifically to organizations in which the teams are temporary structures. Other project team based structures include permanent multispecialist teams.

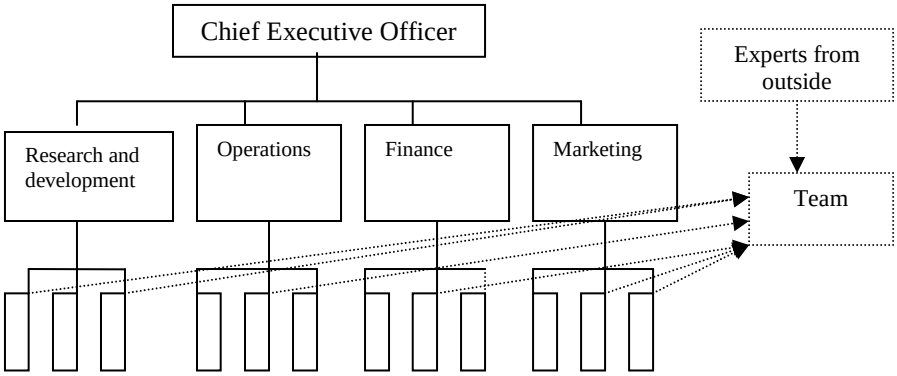

Figure 3.7. The team based structure

Its advantages and disadvantages are summarized in Table 3.7.

Table 3.7. Advantages and disadvantages of the team based structure

Advantages	Disadvantages
• making use of the expert knowledge of specialists; • direct contacts between members of the project team and team problem solving; • short communication paths and fast decision making; • high flexibility and speed of reaction to new problems; • substantial innovation activity of members of the project team; • taking the burden of current management off top management	• project groups might become excessively autonomous and hierarchical relations between them might develop; • it might be difficult to precisely define scopes of rights and responsibilities of project teams and the main organization; • project groups might stabilize and indefinitely prolong the realization of the project; • it might be difficult to coordinate activities, especially if several projects are being carried out at the same time in the organization

Source: based on: Druckman D., Singer J.E., Van Cott H.P.: *Organizational Performance*, National Academies Press 1997; Beyerlein M.M., Beyerlein S.T., Johnson D.A.: *Team-Based Organizing*, Emerald Group Publishing, 2003; Pettigrew A.M., Fenton E.M.: *The Innovating Organization*, SAGE, 2000

The matrix structure is one in which functional and staff personnel are assigned to both a basic functional area and to a project or product manager. It provides dual channels of authority, performance responsibility, evaluation and control, as shown in figure 3.7. The matrix form is intended to make the best use of talented people within the firm by combining the advantages of functional specialization and product-project specialization. This structure also increases the number of middle managers who exercise general management responsibilities (through the project manager role) and, thus, broaden their exposure to the organization's wide strategic concerns. In this way, the matrix structure overcomes a key deficiency of functional organizations while the retaining the advantages of functional specialization. The matrix formalizes horizontal teams along with the traditional vertical hierarchy and tries to get an equal share of both. However, the matrix may shift one way or the other. Many companies have found a balanced matrix hard to implement and maintain because one side of the authority structure often dominates. As a consequence, two variations of matrix the structure have evolved – a functional matrix and a product matrix.

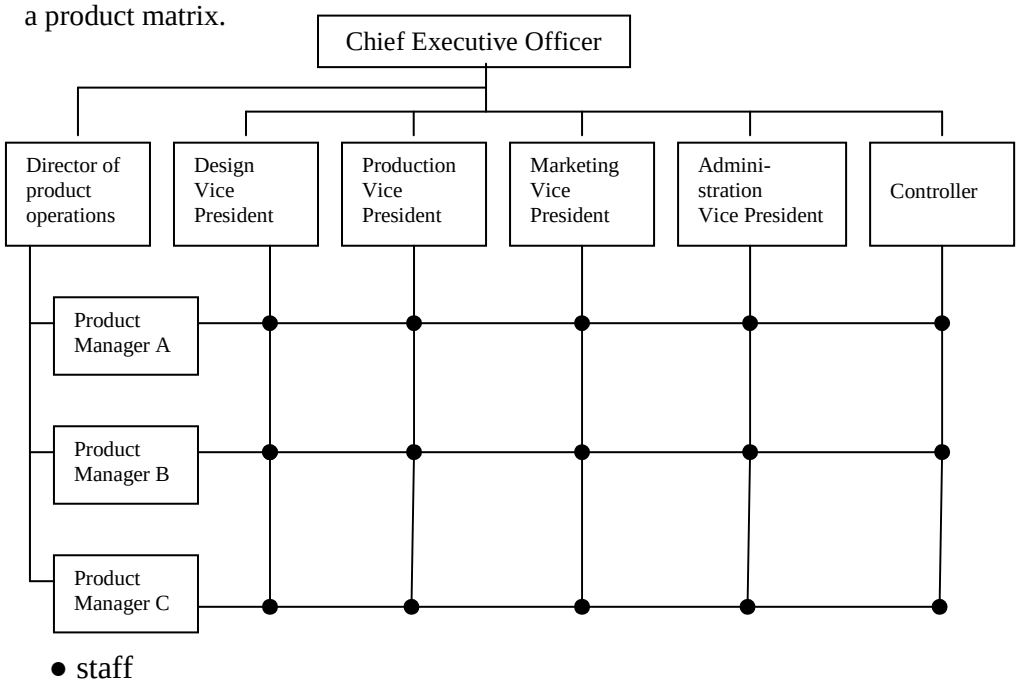

Figure 3.8. The matrix structure (fragment)

Its advantages and disadvantages are summarized in Table 3.8.

Table 3.8. Advantages and disadvantages of the matrix structure

Advantages	Disadvantages
• accommodates a wide variety of project-oriented business activities • provides good training ground for strategic managers • maximizes efficient use of functional managers • fosters creativity and multiple sources of diversity • gives middle management broader exposure to strategic issues	• causes participant to experience dual authority, which can be frustrating and confusing • means participant need good interpersonal skills and extensive training • may result in confusion and contradictory policies • necessitates tremendous horizontal and vertical coordination

Source: based on Daft L.R.: *Understanding the Theory and Design of Organizations*, Thomson South- Western, United Kingdom 2007; Stoner J.A.F., Freeman R.E., Gilbert D.R. Jr: *Management*, 6th edition, Prentice Hall, Englewood Cliffs, New Jersey 1995; Harrison F.L., Lock D.: *Advanced Project Management: A Structured Approach*, Gower Publishing, Ltd., 2004

The tensor structure develops the matrix structure by taking into account a third dimension, e.g. a company that operates with a divisional/functional matrix structure wants to include multi-geographic activities in its structure (Figure 3.9). The core strength of this structure is the combination of product focus through divisions, functional knowledge through functions, and close supplier and customer managements through regions.

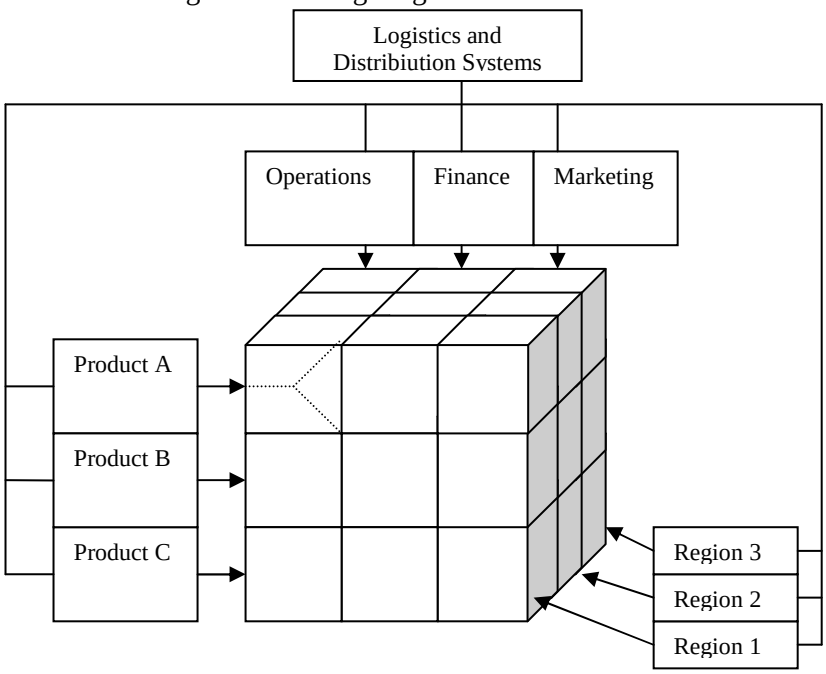

Figure 3.9. The tensor structure
Source: S. Dressler: *Strategy, Organizational Effectiveness and Performance Management: From Basics to Best Practices*, Universal-Publishers, 2004, p.98

Its advantages and disadvantages are summarized in Table 3.9.

Table 3.9. Advantages and disadvantages of the tensor structure

Advantages	Disadvantages
• enables ideal adaptation, flexibility with regard to market needs and business conditions, and economies of scale; • can be extremely powerful for global players with wide product portfolios • innovativeness	• relatively high level of complexity • people are often overstrained-employees simply treat one dimension as dominating, and second and third dimensions are neglected • creates significant overhead costs compared to mono-level structures • more administrative efforts

Source: based on S. Dressler: *Strategy, Organizational Effectiveness and Performance Management: From Basics to Best Practices*, Universal-Publishers, 2004, p.98

The presented structures do not cover all the possibilities in the sense that personalized varieties of each of these alternatives can be easily developed.

As a practical matter, many structures in the real world do not exist in the pure forms which have been outlined in this chapter. Organizations often use a **hybrid structure** that combines the characteristics of functional, divisional, geographical, team or other structures to take advantage of their strengths and avoid some of their weaknesses. Hybrid structures tend to be used in rapidly changing environments because they offer the organization greater flexibility.

3.4. Modern and Future Organizational Structures

Modern structures, typical for theory and practice of management for the last 10-15 years are: process (horizontal) structure, network and virtual structure, boundaryless structure and others.

The process (horizontal) structure organizes employees around core processes, which is shown in Figure 3.10. Organizations typically shift toward a horizontal structure during a procedure called reengineering (it basically means the redesign of a vertical organization along its horizontal workflows and processes). A process refers to an organized group of related tasks and activities that work together to transform inputs into outputs that create value for customers.[90] In a process structure all the people throughout the organization who work on a particular process (such as claims handling or order fulfilment) have easy access to one another so they can communicate and coordinate their efforts. The horizontal structure virtually eliminates both the vertical hierarchy and old departmental boundaries. Technological progress emphasizes computer – and Internet-based integration and coordination. Customers expect faster and better service, and employees want opportunities to use their intelligence, learn

[90] M. Hammer, S. Stanton: *How Process Enterprises Really Work*, Harvard Business Review 77/1999, p.108-118

new skills, and assume a greater responsibility. Thus, numerous organizations choose horizontal structures.

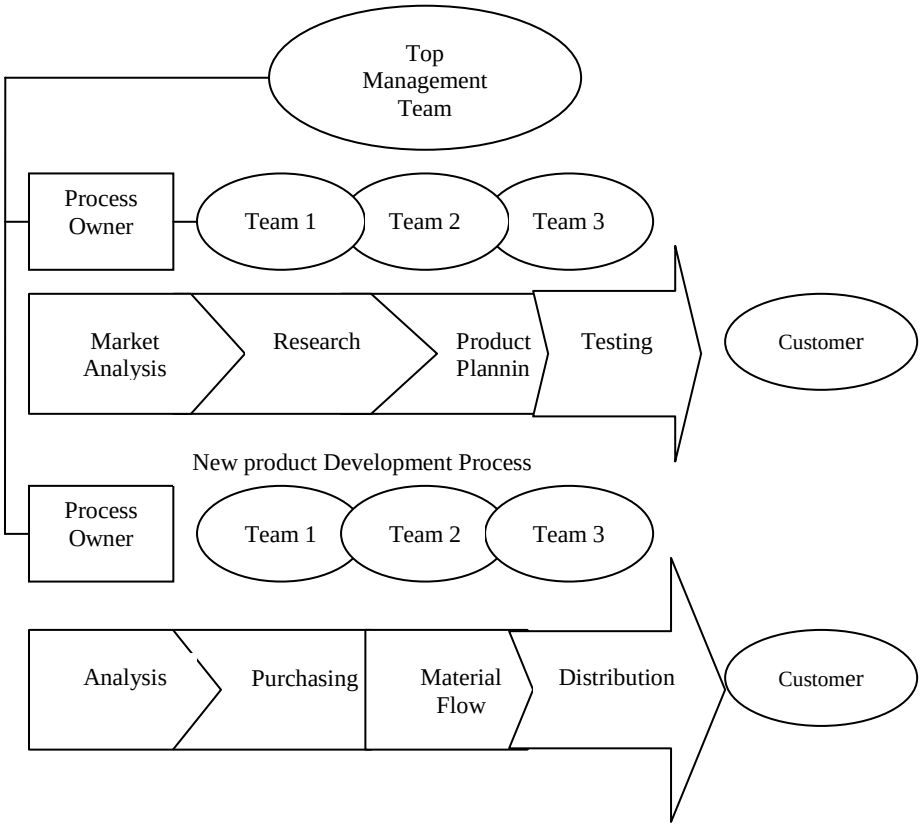

Figure 3.10. The process (horizontal) structure

Source: F. Ostroff: The Horizontal Organization, Oxford University Press, New York 1999, p.102

Its advantages and disadvantages are summarized in Table 3.10.

Table 3.10. Advantages and disadvantages of the horizontal structure

Advantages	Disadvantages
• promotes flexibility and rapid response to changes in customer needs • directs the attention of everyone toward the production and delivery of value to the customer • each employee has a broader view of organizational goals • promotes a focus on teamwork and collaboration • improves the quality of life for employees by offering them the opportunity to share responsibility, make decisions, and be accountable for outcomes	• determining core processes is difficult and time consuming • requires changes in culture, job design, management philosophy, and information and reward systems • traditional managers may balk when they have to give up power and authority • requires significant training of employees to work effectively in a horizontal team environment, • can limit in-depth skill development

Source: based on Hoag B., Cooper C. L.: *Managing Value-Based Organizations: It's Not What You Think*, Edward Elgar Publishing, 2006; Barabba V.P.: *Meeting of the Minds: Creating the Market-based Enterprise*, Harvard Business Press, 1995; Schmidt W.D., Rieck D.A., Vlcek Ch.W.: *Managing Media Services: Theory and Practice*, Libraries Unlimited 2000; Kermally S.: *Management Ideas: In Brief*, Butterworth-Heinemann 1997; Roberts J.: *The Modern Firm: Organizational Design for Performance and Growth*, Oxford University Press, 2004

The network form has been developed in order to deal simultaneously with higher levels of interorganizational specialization and a greater need for fast adaptation that follows from more instability and turbulence in organizational environments. When organizations specialize, they are often forced to limit the range of their competencies and team with other organizations with different specializations to satisfy customer needs. Such interorganizational teaming results in what is called a network organization or a virtual organization.[91]

Network organizations are generally formed by a broker who selects the member organizations and coordinates their network-related strategic activities. In some instances, the broker performs only strategic planning and financial accounting, all other functions (such as: design, manufacturing, advertising, etc.) being carried out by other organizations in the network.

Similarly, a **virtual organization** is defined as a temporary network of independent companies – suppliers, customers, subcontractors, even competitors – linked primarily by information technology to share skills, access to markets and costs.[92] An agile organization is one that identifies a set of business

[91] Daniel Druckman, Jerome E. Singer, Harold P. Van Cott, National Research Council (U.S.). Committee on Techniques for the Enhancement of Human Performance: *Organizational Performance*, National Academies Press, 1997, p.34

[92] S. Goldman: *Agile Competitors and Virtual Organizations*, Van Naostrand Reinhold, New York 1995

capabilities central to highly profitable operations and then builds a virtual organization around those capabilities, allowing the agile firm to build its business around the core, highly profitable information, services and products.

Figure 3.11 shows an example of the virtual network structure and Table 3.11 summarizes its strengths and weaknesses.

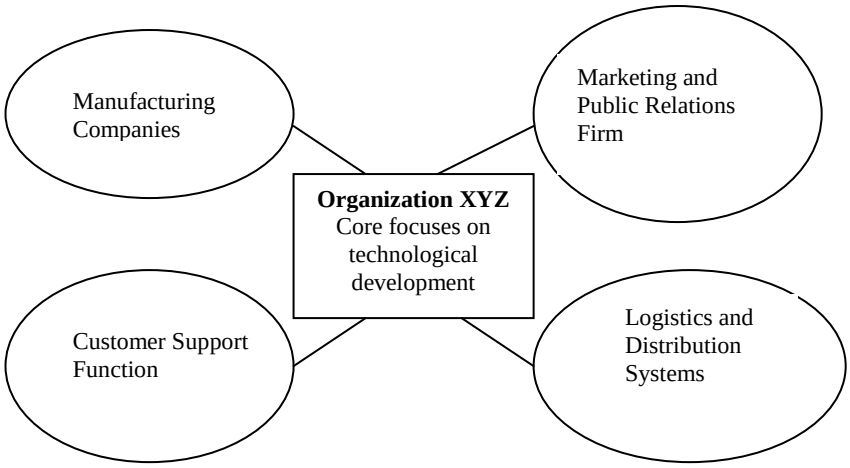

Figure 3.11. The virtual network structure

Source: R.L. Daft: *Understanding the Theory and Design of Organizations*, Thomson South-Western, United Kingdom 2007, p. 219

Table 3.11. Advantages and disadvantages of the virtual network structure

Advantages	Disadvantages
• enables even small organizations to obtain talent and resources worldwide • gives the company immediate scale and reach without huge investments in factories, equipment, or distribution facilities • enables the organization to be highly flexible and responsive to changing needs • reduces administrative overhead costs	• managers do not have hands–on control over many activities and employees • requires a great deal of time to manage relationships and potential conflicts with contract partners • there is a risk of organizational failure if a partner fails to deliver or goes out of business • employee loyalty and corporate culture might be weak because employees feel they can be replaced by contract services

Source: based on Putnik G., Cunha M.M.: *Agile Virtual Enterprises: Implementation and Management Support*, Idea Group Pub., 2006; Franke U.J.: *Managing Virtual Web Organizations in the 21st Century: Issues and Challenges*, Idea Group Inc (IGI), 2002; Senior B., Fleming J.: *Organizational Change*, Pearson Education, 2005

Creating an agile, virtual organization structure involves outsourcing, strategic alliances, a boundaryless structure, an ambidextrous learning approach, and Web-based organizations.

Choosing to outsource activities has been likened to creating a **modular organization.** It provides products or services using different, self –contained specialists or companies brought together – outsourced – to contribute their primary or support activity to result in a successful outcome. Another way for many companies to become more agile are strategic alliances. They are arrangements between two or more companies in which all of them contribute capabilities, resources, or expertise to a joint undertaking, usually with an identity of its own, with each firm giving up overall control in return for the potential participate in and benefit from a joint venture relationship.[93] These relationships are different form outsourcing, as the requesting company usually retains control when outsourcing, whereas strategic alliances involve firms giving up overall control to the joint entity, or alliance, to which they become a partner.

Outsourcing, strategic alliances, product team structures, reengineering are ways to move toward **boundaryless organizations**. They are organizational structures that allow people to interface with others throughout the organization without the need to wait for a hierarchy to regulate that interface across functional business, and geographic boundaries. Globalization and technology, particularly driven by the Internet, is and will be major driver of boundaryless organizations. Conceptually, boundaryless organizations involve the breaking down of structure, hierarchy, specific roles and distance. The virtual organization is one variation or type of boundaryless organizations.

Twenty-first century leaders have increasingly spoken about making their organizations boundaryless, by which they mean the absence of internal and external boundaries between units, levels and locations that lessen their company's ability to generate knowledge, and share knowledge to the places it can be used to create value. Forward thinkers describe **ambidextrous learning organizations** as ones that innately share knowledge, enable learning within and across organizations, and nurture informal relationships within and outside organizations to foster opportunities to be at the forefront of creating new knowledge.[94]

Both contemporary and future companies will have to look for a new generation of principles and methods of functioning, including new structural solutions based on a lean hierarchy, small centralization, formalization, and standardization of activities.

[93] J.A. Pearce, R. B. Robinson, Jr.: *Strategic Management*, McGraw-Hill, New York 2007, p.347
[94] J.A. Pearce, R. B. Robinson, Jr.: *Strategic*….op.cit., p.352

4. ORGANIZATIONAL STRUCTURES OF POLISH ENTERPRISES IN CONTEXT OF CHOSEN DEVELOPMENT STRATEGIES - EMPIRICAL TURN

4.1. Methodology and Field of Research

A company's strategy is a critical factor determining its structure which also decides its direction and character of development. Therefore, every company should decide whether it should grow or reduce, specialize or diversify, operate in one or several markets, use creative or non-creative imitation, enter into alliances or not. Literature mentions various variants of strategies at the corporate level that take into account different directions and types of company development. A complete classification at the company level was proposed by L. Rue and P. Holland, who divide company strategies into the following categories:[95]

- growth strategies (concentration, vertical integration and diversification),
- stabilization strategies,
- defensive strategies (restructuring, reduction, shedding and liquidation),
- combined strategies.

Every strategic option requires an adequate organizational structure ensuring its efficient implementation, thus contributing to the company's development. In order to adjust its structure to its strategy, a company will need to effect changes in the division of labour, its hierarchic structure, degree of centralization, method of coordination (cooperation between internal organizational units) and the degree of formalization. A growth strategy usually leads to greater work specialization, a larger management span, and more substantial formalization ensuing from standardization. In the course of further development of a company, it brings about a more rigid company structure, which in turn makes it necessary to reduce bureaucracy in the organizational structure towards an organic structure with a high level of decentralization. A functional structure with a high degree of centralization is suitable for concentration strategies. By

[95] L. Rue, P. Holland: *Strategic Management*, McGraw-Hill, New York 1989, p.41

contrast, diversification requires more decentralized structures. It should be noted that in the case of related diversification the most suitable structures are divisional or matrix. On the other hand, in the case of unrelated diversification realized in terms of external growth, a decentralized structure or a holding may be more adequate.[96] Also restructuring strategies significantly influence structural solutions. It usually entails the development of control structures and procedures that make up an early warning system.[97]

Analysis of the organizational structures of large Polish industrial companies was done with respect to three different strategic options: a single business strategy, a diversification strategy, and a restructuring strategy. The research presented in this chapter was conducted at the Department of Management of the Technical University of Łódź in the years 2001-2006 and comprises three research projects.

The first one, entitled "**The features and effects of organizational and human resource restructuring on the example of large companies**, referred to as **Sample 1**, was conducted in the years 2001-2002 as part of the Author's doctoral dissertations and was funded with a State Committee for Scientific Research grant. The objective of the research was to analyse top management's opinions about the reasons, methods, conditions and effects of organizational and human resource restructuring. The Author studied sixty-five companies from all over Poland that conducted restructuring processes. Those companies belonged to three sectors: light industry, the energy industry and the construction industry. They were large companies, where gross employment before restructuring was over 249 persons. Empirical material was collected by means of a mail questionnaire.

The second research project called **"Organizational restructuring of industrial companies from the Łódź area"**, referred to as **Sample 2**, was conducted in 2003 by the Institute of Management of the Technical University of Łódź. The objective was to analyse changes in the organizational structure and management system of companies that resulted from restructuring Twenty-seven companies from the Łódź area were studied; they had evolved from former large state-owned companies and belonged to various sectors. The vast majority of the companies studied (92.8%) had been created by 1989, so before Poland started the process of political and economic transformation. Therefore, those companies implemented extensive and profound structural and proprietary changes to be able to face the new market reality and ensure prospects for further development. Empirical material was also collected by means of a mail questionnaire.

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[96] H.G. Steinmann, G. Schreyogg: *Zarządzanie – podstawy kierowania przedsiębiorstwem. Koncepcje, funkcje, przykłady*, Oficyna Wydawnicza Politechniki Wrocławskiej, Wrocław 2001, p.789.

[97] A. Stabryła: *Zarządzanie strategiczne w teorii i praktyce firmy*, Wydawnictwo Naukowe PWN, Warszawa 2005, p. 59.

The third research project called "**The influence of strategy on a company's organization"**, referred to as **Sample 3**, was conducted in 2006 with a grant from the Reserve of the Rector of the Technical University of Łódź. The objective of the research was to analyse the relationship between strategy and organizational structure in the process of company development. The companies studied included 79 large Polish manufacturing companies from all over the country. The companies were selected deliberately according to the following criteria: manufacturing activity, employment of over 249 persons over the past 5 years, implementation of a business strategy, and pursuing a growth strategy manifested in the company's substantial expansiveness (e.g. expanding to new markets, manufacturing diversification, investment activity, etc.). In terms of growth direction, the strategy of concentration on one business (specialization) was pursued by 39 companies (49.4% of total companies), and the diversification strategy by 40 companies (50.6%). The research was conducted by the CEM Market and Public Opinion Research Institute based in Cracow. The research tool used was a telephone survey supported with a mail and e-mail questionnaire.

Respondents in all the study samples were members of top management or their proxies.

Each of these projects encompassed a wider range of issues; however, for the purposes of this work, only those results concerning the character and changes in organizational structures in the context of a chosen development strategy are presented. Results from the first two research projects are given in Section 4.4, which concerns changes in organizational structures ensuing from restructuring strategies, and results from the third research project constitute the empirical material for Sections 4.2 and 4.2 devoted to specialization (concentration) and diversification. It should be noted that the rationale for a strategic choice between concentration and diversification is the optimum allocation of company resources manifested in the pursuit of the highest possible rate of return. Furthermore, another key factor for making such a choice is the company's standing and the stage of market development.

Each growth strategy can be carried out internally or externally. Of course, there can also be a mixture of internal and external actions. Internal growth is based on a company's own investments that develop its potential on the basis of existing assets. Most frequently, such growth is achieved by investments in fixed assets related to production capacity, which makes it possible to increase the size of the company, its market share and financial potential (measured as its market value). The characteristic feature of internal growth is the fact that it takes place within an existing organizational structure.

External growth is an alternative for internal growth. It is manifested through various forms of cooperation with other businesses, which may vary from very loose cooperation to very close capital and proprietary relationships. In the former case, external growth usually leads to making better use of the potential of the cooperating companies. In the latter case, there occurs a revolutionary

change in the organizational-legal-proprietary structure.[98] Consequently, external growth includes the following: mergers (also consolidations and incorporations), takeovers (capital groups, holdings), strategic alliances and other forms of cooperation such as cooperation agreements, associations, consortia, and joint ventures.

Also in this case, the manner of development (internal or external) is determined by market and internal factors. Both are related to the company life cycle, as its potential for growth depends on its stage of development.

4.2. Single Business Concentration

Single Business Concentration (concentration strategy) is a grand strategy in which a firm directs its resources to the profitable growth of a single product, in a single market, with a single dominant technology.[99] It involves focusing on doing better what a company is already doing well. It is realized by using existing strengths in new and productive ways, but without taking the risk of great shifts in direction. There are important organizational and managerial **advantages** to concentrating on just one business, namely:

- this strategy is based on known skills and capabilities and in this respect it is generally low risk
- there is less chance that senior management's time or organizational resources will be stretched thinly over too many activities,
- because the organization's production and marketing skills are concentrated on specialized products and related consumers, these skills can be developed and improved to create competitive advantage and furthermore it carries a heftier built-in incentive for managers to come up with ways to strengthen the firm's long term competitive position in the industry rather than pursuing the fleeting benefits of higher short term profits;
- all the firm's managers, especially top executives, can have hands –on contact with the core business and in depth knowledge of operations;
- the company has the opportunity to be sensitive to consumer needs with innovative new product features, or enhance anywhere in the activity-cost chain.

On the other hand single business concentration strategy has two key **limitations**, namely:

- if the industry stagnates, declines, or otherwise becomes unattractive, a company's future outlook dims, its growth rate becomes tougher to sustain, and superior profit performance is much harder to achieve;

[98] Faulkner D., Bowman C.: *Strategie konkurencji*, Gebethner i S-ka, Warszawa 1996
[99] J.A. Pearce, R. B. Robinson, Jr.: *Strategic Management*, McGraw-Hill, New York 2007, p.202.

- at times, changing customer needs, technological innovation, or new substitute products can undermine or wipe out a single business company.[100]

This strategy makes sense when a company's current industries are attractive, have good growth potential, and do not face serious threats. It is particularly applicable to small businesses which concentrate their efforts on specific market niches. Except **concentrated growth** (increasing use of present products in present markets), the concentration strategy includes: market development, product development and innovation.[101]

Market development consists of marketing present products, often with cosmetic modifications, to customers in related market areas by adding channels of distribution or by changing the content of advertising or promotion. It allows firms to practice a form of concentrated growth by identifying new uses for existing products and new demographically, psychographically, or geographically defined markets.

Product development involves the substantial modification of existing products or the creation of new but related products that can be marketed to current customers through established channels. It is often linked to an attempt to extend or prolong a product's life cycle or to take advantage of a favourite reputation or brand name.

Innovation is a strategy that seeks to reap the premium margins associated with the creation and customer acceptance of a new or greatly improved product.[102] The line which differentiates a truly new product from a modification is extremely difficult to quantify. It can be risky not to innovate in certain industries as a barrier against competition. Innovative companies can stay ahead by introducing new products before their rivals do and concentrating on production and marketing to establish and consolidate a strong market position.

Out of the 39 Polish manufacturing companies studied (Sample 3) that pursued a growth strategy based on specialization, almost half revealed wide product expansion (48.7%), which means that they manufactured a range of products belonging to one sector that were close substitutes meeting the same consumer needs. These companies mostly chose specialization based on the criterion of product, at medium or narrow market concentration. Only two companies from this group pursued wide market concentration (introduced their products to other geographic markets). In order to pursue a wide range growth strategy, companies more often chose the external mode involving: merger (4 companies), takeover (3 companies) and strategic alliance in terms of

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[100] A.A. Thompson Jr., A.J. Strickland III: *Strategic Management. Concepts and Cases*, Irwin Homewood, Boston 1992, 6th edition, p. 163-164; J.L. Thompson, *Strategic Management. Awareness and Change*, Chapman & Hall, London 1993, second edition, p.496-497.

[101] J.R. Schermerborn Jr.: *Management for Productivity*, John Wiley & Sons, Inc., New York 1993, fourth edition, p.229.

[102] See: Ph. Kotler, K. Keller, *Marketing management* Analysis, Planning and Control, 3rd ed., Pearson Education, Upper Saddle River, New York 2005, J.A. Pearce, R. B. Robinson, Jr.: *Strategic Management*, McGraw-Hill, New York 2007

launching a new product (2 companies) or manufacturing (1 company). On the other hand, a similar number of the companies studied (12, which is 30.8%) chose narrow specialization focusing only on one product or product line and limiting their sales markets to one or a few segments in a certain geographic market. This is synthetically illustrated by Table 4.1.

Table 4.1. Single business strategy by product and market concentration and growth method in the companies studied

Range of market concentration	Total		Range of product concentration					
			Narrow		Wider		Wide	
	N	%	N	%	N	%	N	%
High specialization	20	51,3	7	17,9	2	5,1	11	28,2
Medium specialization	13	33,3	4	10,3	3	7,7	6	15,4
Low specialization	6	15,4	1	2,6	3	7,7	2	5,1
Total	39	100	12	30,8	8	20,5	19	48,7
Growth method								
Internal growth	23	58,9	8	20,5	6	15,4	9	23,1
Mixed growth (internal and external)	16	41,1	4	10,3	2	5,1	10	25,6
Total	39	100	12	30,8	8	20,5	19	48,7

N** – number of companies* ***% - the percentage of the group (39=100%)

Source: Own research

One could argue that the greatest proportion of the companies studied (7, or 28.2%) pursued product development and concentrated growth strategies. Some companies chose market development strategies (4 entities) and innovation strategies (8 entities). Three companies followed moderate product or market development strategies, two companies intended to pursue a product development strategy, and four companies intended to follow a market development strategy.

A company's development strategy as well as change in its size, as it was mentioned above, influences its organizational structure. In the case of a concentration strategy, many authors believe that the best solution is a functional structure with a high degree of centralization.

And it is the functional structure that prevailed in the companies studied (43.6%) together with the line and staff structure (20.5%), which is shown in Table 4.2. The growth method pursued turned out not to be very important. However, companies with external growth tended to choose functional structures (14 companies). Some companies had more complicated organizational structures typical of diversified companies: a matrix structure was revealed in 2 companies, and a divisional structure in 4 companies. Only a few companies used the latest structural solutions, such as: a project structure (2 companies) or a process structure (3 companies). In one company with a mixed type of growth a hybrid structure was found, defined as a functional structure with elements of a matrix structure.

Table 4.2. Type of organizational structure and growth method in the specialized companies studied

Type of the organizational structure	Total		Single business concentration – method of growth			
			Internal		Internal and external	
	N	%	N	%	N	%
Functional structure	17	43,6	14	58.3	3	20.0
Line and staff structure	8	20,5	5	20.8	3	20.0
Divisional structure	4	10,3	1	4.2	3	20.0
Project/ team based structure	2	5,1	1	4.2	1	6.7
Matrix structure	2	5,1	1	4.2	1	6.7
Process structure	3	7,7	2	8.3	1	6.7
Networked structure/ boundaryless organization	2	5,1	0	0.0	2	13.2
Others	1	2,6	0	0.0	1	6.7
Total	**39**	**100**	**24**	**100**	**15**	**100**

N** – number of companies* ***% - the percentage of the group (39=100%)

Source: Own research

Taking into consideration the range of concentration by market (Table 4.3) and by product (Table 4.4), one could argue that:

- both companies with wide and narrow product concentration for the most part chose a functional structure (10 companies in the case of wide concentration and 5 in the case of narrow concentration) or a line and staff structure (5 and 3 companies, respectively); the most differentiated organizational structures were found with a moderate degree of product concentration: respondents mentioned both a functional structure (2 companies), a matrix structure (2 companies), and also a divisional, project, process, and hybrid structure;
- companies operating in a low concentration market tended to have functional structures, and in some isolated cases there was a matrix, hybrid or networked structure; companies operating in high concentration markets had for the most part functional structures (9 entities) or line and staff structures (5 entities); also in this case the greatest differentiation in terms of organizational structure was shown by companies with moderately specialized markets, even though functional and line and staff structures still prevailed;
- companies following a concentrated growth strategy tended to have functional or line and staff structures, although a divisional structure (in 1 entity) and a process structure (in 2 entities) were also found; in companies following market development strategies respondents mentioned functional structures; similarly as in the case of product development strategies, companies revealed for the most part functional structures (7 entities) and line and staff structures (3 entities), and one

entity had a project structure; 5 out of 8 companies with innovation strategies had functional structures, while in 1 case it was divisional and in 2 cases networked; companies with moderate market and product specialization as well as those going in the direction of market or product development had a variety of structures: functional (3 entities), divisional (2 entities), project, process, matrix, and line and staff (single entities).

Table 4.3. Type of organizational structure by product concentration in the specialized companies studied

Type of the organizational structure	Total		Range of product concentration					
			Narrow		Wider		Wide	
	N	%	N	%	N	%	N	%
Functional structure	17	43,6	5	12,8	2	5,1	10	25,6
Line and staff structure	8	20,5	3	7,7	0	0,0	5	12,8
Divisional structure	4	10,3	2	5,1	1	2,6	1	2,6
Project/ team based structure	2	5,1	0	0,0	1	2,6	1	2,6
Matrix structure	2	5,1	0	0,0	2	5,1	0	0,0
Process structure	3	7,7	2	5,1	1	2,6	0	0,0
Networked structure/ boundaryless organization	2	5,1	0	0,0	0	0,0	2	5,1
Others	1	2,6	0	0,0	1	2,6	0	0,0
Total	**39**	**100**	**12**	**30,8**	**8**	**20,5**	**19**	**48,7**

N** – number of companies* ***% - the percentage of the group (39=100%)

Source: Own research

Table 4.4. Type of organizational structure by market concentration in the specialized companies studied

Type of the organizational structure	Total		Range of market concentration					
			High specialization		Medium specialization		Low specialization	
	N	%	N	%	N	%	N	%
Functional structure	17	43,6	9	23,1	5	12,8	3	7,7
Line and staff structure	8	20,5	5	12,8	3	7,7	0	0,0
Divisional structure	4	10,3	2	5,1	2	5,1	0	0,0
Project/ team based structure	2	5,1	1	2,6	1	2,6	0	0,0
Matrix structure	2	5,1	1	2,6	0	0,0	1	2,6
Process structure	3	7,7	2	5,1	1	2,6	0	0,0
Networked structure/ boundaryless organization	2	5,1	0	0,0	1	2,6	1	2,6
Others	1	2,6	0	0,0	0	0,0	1	2,6
Total	**39**	**100**	**20**	**51,3**	**13**	**33,3**	**6**	**15,4**

N** – number of companies* ***% - the percentage of the group (39=100%)

Source: Own research

A range of factors influence a company's organizational structure. Therefore, respondents were asked to assess the importance of selected structural factors from the point of view of their impact on organizational structure. Results are shown in Figure 4.1 and Table 4.5.

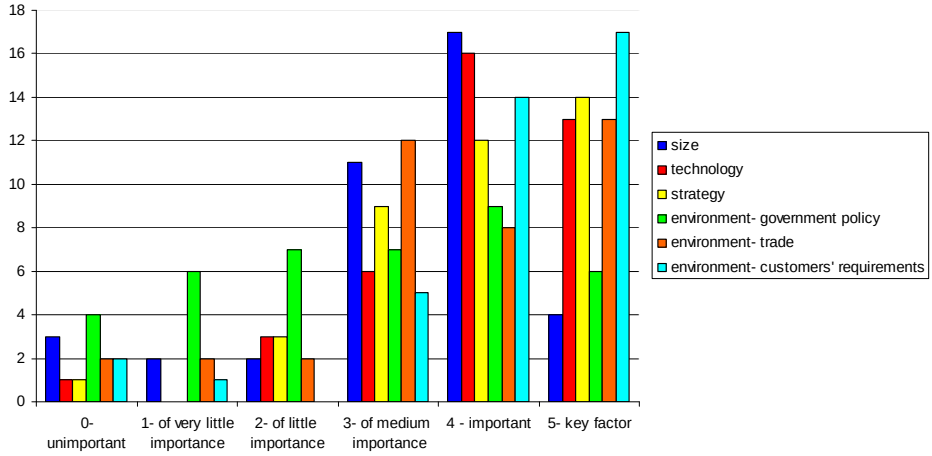

Figure 4.1. Significance of conceptual variables in the specialized companies studied

Source: Own research

It is surprising that for some respondents the above-mentioned factors did not play a role as structural variables, even though their impact is widely recognized in literature and proven by numerous researchers. Factors that were most often discarded as irrelevant were the environment, including governmental policy (4 respondents), the sector and customer requirements (2 respondents each) and company size (2 respondents). On the other hand, according to respondents, the most important were customer requirements, technology, and strategy (these factors received the greatest number of grades 4 and 5), and the least importance was attributed to governmental policy and the sector. Company size was found to be a structural factor of moderate relevance.

Table 4.5. Conceptual variables according to market / product concentration and method of growth in the studied specialized companies[103]

	Narrow product concentration 12 entities				**Wider product concentration 8 entities**			
Conceptual variables	$\bar{x}$	**S**	**M**	**Q**	$\bar{x}$	**S**	**M**	**Q**
size	4,0	0,81	4	2	2,87	0,99	3	1
technology	3,9	1,04	4	2	4,0	0,92	4	0,5
strategy	4,0	1,04	4	2	3,85	1,12	4	2
environment:								
- government policy	2,81	1,25	3	2	2,62	1,59	2,5	3
- trade	3,75	1,35	4	2	3,42	1,13	3	2
- customers' requirements	4,27	0,90	5	2	4,12	0,83	4	1,5
	Wide product concentration 19 entities				**High market concentration 20 entities**			
	$\bar{x}$	**S**	**M**	**Q**	$\bar{x}$	**S**	**M**	**Q**
size	3,55	0,92	4	1	3,61	0,77	4	1
technology	4,11	0,87	4	1	4,35	0,67	4	1
strategy	4,0	0,90	4	2	4,05	0,97	4	2
environment:								
- government policy	3,37	1,31	3,5	2,5	3,38	1,33	4	2
- trade	3,77	1,06	4	2	4,15	0,95	4	2
- customers' requirements	4,22	1,00	4	1	4,47	0,77	5	1
	Medium market concentration 13 entities				**Low market concentration 6 entities**			
	$\bar{x}$	**S**	**M**	**Q**	$\bar{x}$	**S**	**M**	**Q**
size	3,58	1,08	4	0,5	3,17	1,32	3	1
technology	3,55	1,0	4	1	4,0	1,09	4	1
strategy	3,69	1,03	4	1	4,33	0,81	4,5	1
environment:								
- government policy	2,81	1,40	3	2	2,33	1,21	2,5	2
- trade	3,63	1,15	4	1	3,0	1,26	3	0
- customers' requirements	4,0	1,12	4	1	4,0	0,75	4	1
	Internal growth 24 entities				**Internal and external growth 15 entities**			
	$\bar{x}$	**S**	**M**	**Q**	$\bar{x}$	**S**	**M**	**Q**
size	3,61	0,89	4	1	3,38	1,12	3	1
technology	3,95	0,99	4	1,5	4,14	0,77	4	1
strategy	3,74	0,91	4	1	4,33	0,97	5	1
environment:								
- government policy	2,9	1,48	3	2	3,21	1,18	3	2
- trade	3,59	1,26	3,5	2	3,86	0,99	4	2
- customers' requirements	4,09	1,06	4	2	4,40	0,63	4	1

$\bar{x}$ - average **S**- standard deviation **M**- median **Q** – interquartile range

Source: Own research

[103] Respondents were asked to assess selected factors on a 0-5 scale, where 0 meant that a factor was unimportant, 1 that it was of small importance and 5 that it was a key factor with a strong influence on the company's organizational structure. Only assessments ranging from 1 to 5 were taken for further calculations.

Taking into consideration the type of concentration, the factor with the greatest relevance for company structure was customer requirements (the average grade for this factor was 4 or higher in all the groups, and in companies with narrow product concentration the median was 5, which means that according to 50% of respondents in that group this factor played a key role in shaping organizational structure. Other significant factors were strategy and technology, which is shown by their medians being 4 in the case of most groups of companies. In companies operating in extremely specialized markets and in those characterized by a mixed growth type (both external and internal), strategy was assessed to be a very important structural factor (medians of 4.5 and 5).

Company size and sector are more essential for the structures of companies with either narrow or wide product concentration, operating in highly and moderately specialized markets (a median of 4), and less so for companies with medium product concentration operating in low concentration markets (a median of 3). Company size is a more important structural factor for companies with internal growth (3.61 on average), and sector is important for mixed growth entities (3.86 on average).

According to respondents, the least important was governmental policy; however, high standard deviations and interquartile range calculated for this factor in each of the analyzed groups show that respondents had the most diverse views as to its significance and either perceived this factor as critical or relatively unimportant from the point of view of company structural solutions.

The organizational structure of a company is characterized by certain properties, such as: the manner of division and grouping of tasks, the type of internal coordination, the level of centralization and formalization.

In the majority of the companies studied, the division and grouping of tasks had a functional character, which was often accompanied by other types of division and grouping of tasks, mostly technological and product-based. Over half of the companies had vertical coordination, often concurrent with personal and horizontal mechanisms of coordination. Detailed information pertaining to this issue is presented in Tables 4.6 – 4.8. Respondents were allowed to indicate more than one criterion for grouping tasks and coordination mechanisms, which is why the total number of companies does not add up to 100% in particular groups.

Table 4.6 Division and grouping of tasks and coordination mechanisms in the companies studied

Method of division and grouping of tasks	Total		Single business concentration – growth method			
			Internal		Internal and external	
	N	%	N	%	N	%
pertaining to the realization of certain tasks and functions (functional)	24	61.5	14	35.9	10	25.6
used in the context of a particular product (product-based)	9	23.1	6	15.4	3	7.7
resulting from a technological process (technological)	19	48.7	12	30.8	7	17.9
dependent on the type of customers (by customer group)	7	17.9	5	12.8	2	5.1
dependent on localization (by region)	6	15.4	3	7.7	3	7.7
dependent on processes conducted (process-based)	9	23.1	7	17.9	2	5.1
Type of internal coordination						
vertical (hierarchy, superior-subordinate relationship)	23	59.0	18	46.2	5	12.8
process-based (standardization, procedures, rules)	7	17.9	3	7.7	4	10.3
horizontal (grouping people into task or project teams)	7	17.9	5	12.8	2	5.1
personal (participation, directives), mutual agreement, consensus	11	28.2	7	17.9	4	10.3
coordinator positions	6	15.4	2	5.1	4	10.3

***N** – number of companies* ***%** – percentage of the group (39=100%)*

Source: Own research

Table 4.7 Division and grouping of tasks and coordination mechanisms and product concentration in the companies studied

Method of division and grouping of tasks	Range of product concentration					
	Narrow		Wider		Wide	
	N	%	N	%	N	%
pertaining to the realization of certain tasks and functions (functional)	6	15.4	5	12.8	13	33.3
used in the context of a particular product (product-based)	5	12.8	0	0.0	4	10.3
resulting from a technological process (technological)	6	15.4	2	5.1	11	28.2
dependent on the type of customers (by customer group)	4	10.3	1	2.6	2	5.1
dependent on localization (by region)	3	7.7	0	0.0	3	7.7
dependent on processes conducted (process-based)	5	12.8	2	5.1	2	5.1

Type of internal coordination						
vertical (hierarchy, superior-subordinate relationship)	7	17.9	6	15.4	10	25.6
process-based (standardization, procedures, rules)	2	5.1	1	2.6	4	10.3
horizontal (grouping people into task or project teams)	2	5.1	2	5.1	3	7.7
personal (participation, directives), mutual agreement, consensus	2	5.1	1	2.6	8	20.5
coordinator positions	1	2.6	3	7.7	2	5.1

***N** – number of companies* ***%** – percentage of the group (39=100%)*

Source: Own research

Table 4.8 Division and grouping of tasks and coordination mechanisms and market concentration in the companies studied

	Range of market concentration					
Method of division and grouping of tasks	**High specialization**		**Medium specialization**		**Low specialization**	
	N	**%**	**N**	**%**	**N**	**%**
pertaining to the realization of certain tasks and functions (functional)	11	28.2	9	23.1	4	10.3
used in the context of a particular product (product-based)	5	12.8	2	5.1	2	5.1
resulting from a technological process (technological)	12	30.8	4	10.3	3	7.7
dependent on the type of customers (by customer group)	5	12.8	0	0.0	2	5.1
dependent on localization (by region)	2	5.1	2	5.1	2	5.1
dependent on processes conducted (process-based)	6	15.4	2	5.1	1	2.6
Type of internal coordination						
vertical (hierarchy, superior-subordinate relationship)	10	25.6	9	23.1	4	10.3
process-based (standardization, procedures, rules)	2	5.1	5	12.8	0	0.0
horizontal (grouping people into task or project teams)	3	7.7	3	7.7	1	2.6
personal (participation, directives), mutual agreement, consensus	8	20.5	1	2.6	2	5.1
coordinator positions	3	7.7	1	2.6	2	5.1

***N** – number of companies* ***%** – percentage of the group (39=100%)*

Source: Own research

More detailed analysis shows that:

- in companies with internal growth, tasks were more often grouped according to technological, process-based or product-based, and customer group criteria, while in companies with mixed growth, tasks tended to be divided by region. The functional criterion prevailed in both types of companies;

- companies with moderate product concentration did not reveal division or grouping of tasks according to product-based or regional criteria, and companies operating in moderately specialized markets did not show division or grouping according to customer groups. Companies with narrow product concentration and those operating in highly specialized markets tended to choose technological and process-based criteria more often than other companies did. Almost 50% of companies that made use of the product-based criterion were companies with wide product concentration, and companies operating in low specialization markets tasks were grouped according to several criteria at the same time, often combining functional and technological criteria.
- hierarchy as a coordination mechanism prevailed in companies with internal growth irrespective of range of product and market concentration. Grouping personnel in task teams was more popular in companies characterized by narrow and medium product concentration, and in particular in those which divided and grouped tasks according to technological and process criteria. A personal character of coordination was primarily characteristic of entities operating in highly specialized markets and having wide product concentration, that is, those which pursue a product development strategy. Coordinator positions were more often made use of in companies with mixed growth, medium product concentration and high market concentration.

A particularly important role in the functioning of a company is also played by the distribution of decision authority and division of power, as well as by the degree of formalization defined by the number of regulations describing various aspects of organization and functioning of a company, their level of detail and rigidity. Respondents were asked to assess the division of power in their company on a 1-5 scale, 1 being a very high level of centralization, and 5 very low (a high level of decentralization). Respondents assessed the degree of formalization of their companies on a similar scale: 1 meant a very small number of documents, rules and procedures, and 5 very large. Results are presented in Table 4.9 and in Figure 4.2.

Table 4.9. Assessment of degree of centralization and formalization in particular groups of the companies studied

	Degree of centralization				**Degree of formalization**			
Groups of companies	$\bar{\mathbf{x}}$	**S**	**M**	**Q**	$\bar{\mathbf{x}}$	**S**	**M**	**Q**
Total companies	1.94	1.02	2	2	3.46	0.94	4	1
Narrow product concentration	2.08	1.16	2	2	3.66	0.98	4	1
Wider product concentration	1.62	0.91	1	1.5	3.0	0.53	3	0
Wide product concentration	2.0	1.0	2	2	3.52	1.02	4	1
High market concentration	1.65	0.87	1	1.5	3.70	1.03	4	1
Medium market concentration	2.23	0.92	2	1	3.15	0.88	3	2
Low market concentration	2.33	1.50	2	3	3.33	0.51	3	1
Internal growth	2.08	1.01	2	2	3.58	0.88	4	1
Internal and external growth	1.73	1.03	1	2	3.27	1.03	3	1

$\bar{\mathbf{x}}$ - average **S**- standard deviation **M**- median **Q** – interquartile range

Source: Own research

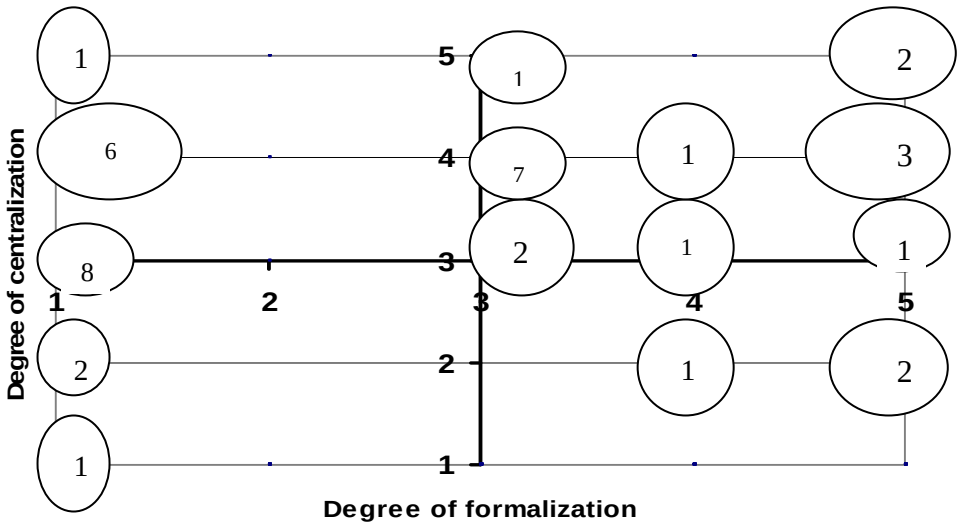

Figure 4.2. Degree of centralization and formalization in the companies studied

Source: Own research

In 18 out of the 39 companies studied, respondents said that the degree of decision centralization was very high. They were mostly companies operating in a narrowly specialized market as well as those characterized by medium product concentration (in both cases the median was 1). At the same time, those companies showed a medium to high degree of formalization (8 and 7 entities, respectively). On the other hand, 11 respondents indicated decentralization, evaluating the degree of centralization in their companies at the level of four or five. They were for the most part companies with wide and narrow product concentration operating in medium and low specialization markets. The lowest level of formalization was revealed in entities with wider product and market concentration and in less centralized organizations. In companies with internal growth, the degree of decentralization and formalization was assessed to be higher than that in companies with mixed growth.

In summary, the companies studied that were pursuing a concentration strategy had mostly functional structures (with functional and line and staff structures prevailing), where tasks were divided and grouped according to certain functions and stages of the technological process (which resulted from the importance of technology as a factor determining structure), and coordination was hierarchical. Those companies were characterized by a high degree of centralization and formalization. Thus, they can be classified as classical structural solutions. In terms of the classification of R.M. Burton, G. DeSanctis and B. Obel (presented in Chapter 2), organizational structures of

the companies studied corresponded to model B (functional, tall, complicated, machine structures) and to model A (simple, blob, orderly, family structures).

On the other hand, there were also those companies whose organizational structures had a more modern character (process-based and project-based structures), with a relatively high degree of decentralization, low degree of formalization, horizontal internal coordination and process-based division and grouping of tasks. The study also revealed companies with organizational structures typical of diversified companies (matrix or divisional structures), even if respondents declared a concentration strategy. However, they were only isolated cases in the studied group of companies. This might suggest that those companies were coming closer to diversification.

4.3. Diversification

Diversification is a company growth strategy whereby a company sets up or acquires businesses outside its current products and markets.[104] A diversification strategy can be realized by the acquisition of a new business in related or unrelated areas, or by investment in new ventures. The key objectives are to gain an extra market share and seek opportunities which could generate synergy. This would lead to a larger size and increased power, and, ideally, to improved profitability resulting from the synergy.[105] Diversification can also bring the complications of operating in new and often unfamiliar business areas, but is an appropriate option when a company's current industries have little growth potential or are unattractive in other ways. When an industry consolidates and becomes mature, a company may have no choice for growth but diversification, unless there are other markets to seek (for example other international markets).

In deciding on which industries to diversify into, companies can choose industries either related or unrelated to their core business. A **related diversification strategy** involves diversifying into businesses whose activity cost chains are related in ways that satisfy the better-off test.[106] What makes related diversification attractive is the opportunity to turn strategic fits into competitive advantages. Strategic fit relationships can arise out of sharing technology, common labour skills and requirements, common suppliers and raw material resources, the potential for joint manufacture of parts and components, similar operating methods, similar kinds of managerial know-how, reliance on the same types of marketing and merchandising skills, ability to share a sales force, ability to use the same wholesale distributors or retail dealers, or potential

[104] Ph. Kotler, G. Armstrong: *Marketing. An Introduction*, Prentice- Hall International, Inc., New Jersey 1993, p.32.
[105] J.L. Thompson: *Strategic…..op.cit.*, p.501.
[106] M. E. Porter: *From Competitive Advantage to Corporate Strategy*, Harvard Business Review, New York 1987, p.53-57

for combining after-sale service activities.[107] The fit or relatedness can occur anywhere along the businesses' respective activity-cost chains.

A strategy of unrelated diversification involves diversifying into whatever industries and businesses hold promise for attractive financial gain; pursuing strategic fit relationships is of minor importance. Firms that pursue unrelated diversification nearly always enter new businesses by acquiring an established company rather than by forming a start up subsidiary within its own corporate structure. Their premise is that growth by acquisition translates into enhanced shareholder value. Suspending the application of the better-off test is seen as justifiable so long as unrelated diversification results in sustained growth in corporate revenues and earnings and none of the acquired businesses end up performing badly. With unrelated diversification, a company can spread financial risks broadly, invest in whatever businesses promise financial gain, and try to stabilize earnings by diversifying into businesses with offsetting up-and-down cycles. On the other hand, this strategy entails two drawbacks: difficulties with managing broad diversification and the absence of strategic opportunities to turn diversification into competitive advantage.[108]

Common diversification strategies include: horizontal integration, vertical integration, concentric diversification and conglomerate diversification. Ansoff[109] was first to distinguish this typology based on technological, market and financial synergies. Characteristics of these strategies are presented in Table 4.10.

Table 4.10. Characteristics of diversification strategies

	Kind of diversification strategy	**Characteristics**
related diversification	Horizontal Integration	A strategy based on growth through the acquisition of similar firms operating at the same stage of the production-marketing chain. It involves expanding the company's existing products into other locations and/or market segments, or increasing the range of products/services offered to current markets, or a combination of both. One of the primary advantages of this alternative is being able to choose from a fairly continuous range of choices, from modest extensions of present products/markets to major expansions - each with corresponding amounts of cost and risk.

[107] A.A. Thompson Jr., A.J. Strickland III: *Strategic……op.cit.,*, p. 170
[108] A.A. Thompson Jr., A.J. Strickland III: *Strategic …..,op.cit.,* p. 173-177.
[109] H.I. Ansoff: *Corporate Strategy*, McGraw- Hill, New York 1965, p.132

	Vertical Integration	A strategy based on the acquisition of firms that supply the acquiring firm with inputs or new customers for its outputs. A company can grow by taking over functions earlier in the value chain that were previously provided by suppliers or other organizations ("backward integration"). A company also can grow by taking over functions forward in the value chain previously provided by final manufacturers, distributors, or retailers ("forward integration"). This strategy can be a good one if the company has a strong competitive position in a growing, attractive industry.
	Concentric Diversification	A strategy that involves the operation of a second business that benefits from access to the first firm's core competencies. In this alternative, a company expands into a related industry, one having synergy with the company's existing lines of business, creating a situation in which the existing and new lines of business share and gain special advantages from commonalities such as technology, customers, distribution, location, product or manufacturing similarities, and government access. This is often an appropriate strategy when a company has a strong competitive position and distinctive competencies, but its existing industry is not very attractive.
unrelated diversification	Conglomerate Diversification	A strategy that involves the acquisition of a business because it presents the most promising investment opportunity available. It involves diversifying into a line of business unrelated to the current ones. The reasons to consider this alternative are primarily seeking more attractive opportunities for growth in which to invest available funds (in contrast to rather unattractive opportunities in existing industries), risk reduction, and/or preparing to exit an existing line of business (for example, one in the decline stage of the product life cycle). Further, this may be an appropriate strategy when, not only the present industry is unattractive, but the company lacks outstanding competencies that it could transfer to related products or industries.

Source: H.I. Ansoff, *Corporate Strategy*, McGraw- Hill, New York 1965, p.132; J.A. Pearce, R. B. Robinson, Jr.: *Strategic Management*, McGraw-Hill, New York 2007, p.210-213; J. Penc: *Strategie zarządzania. Perspektywiczne myślenie, systemowe działanie*, Agencja Wydawnicza Placet, Warszawa 1997, p.43

In the 40 Polish manufacturing companies studied (Sample 3) which pursued a diversification strategy, horizontal diversification prevailed (97.5%). That means that they introduced technologically similar products into existing markets. With this type of diversification, respondents most often indicated its medium dispersion (20 entities), large (10 entities), and small (9 entities). To a definitely larger degree, growth was accomplished through a company's own investments (72.5% of entities), in particular in fixed assets related to

manufacturing capacity. Cooperation with other companies in this respect was preferred by 25% of the companies studied. Detailed information pertaining to this issue is presented in Table 4.11. However, it should be stressed that respondents were allowed to select more than one type of diversification, and that is why in particular groups the number of companies and percentages do not add up to 100%.

Table 4.11 Diversification strategy and growth method in the companies studied (sample III)

Diversification strategy	**Total**		**Growth method**			
			Internal growth		Mixed growth (internal and external)	
	N	**%**	**N**	**%**	**N**	**%**
Horizontal Integration	39	97.5	29	72.5	10	25
Vertical Integration	5	12.5	3	7.5	2	5
Concentric Diversification	8	20	4	10	4	10
Conglomerate Diversification	2	5	1	2.5	1	2.5

***N** – number of companies* ***%** – percentage of the group (*40=100%)

Source: Own research

Conglomerate and vertical diversification had a marginal presence in the group of companies studied. Only a few companies (5 in the case of vertical and 2 in the case of conglomerate diversification) chose that kind of growth implementing it both internally and externally. Concentric diversification, or expanding beyond a company's own industry but with a common market or technological path characterized 20% of the companies studied. Half of them effected this growth on the basis of their own resources, and the other half cooperated with other business entities.

Diversification requires more decentralized structures. It should be noted that in the case of related diversification the most suitable structures are divisional or matrix. On the other hand, in the case of unrelated diversification realized in terms of external growth, a decentralized structure or a holding may be more adequate.

Figure 4.3 and Table 4.12 present the type of organizational structure of the companies studied in the context of their diversification strategies.

Analyzing the data, it becomes clear that functional and line and staff structures prevailed, while structures typical of diversified companies occurred only in a few cases. Divisional and process structures were revealed in 5 and 4 companies respectively, and these structural solutions were found in entities using unrelated diversification. One company with horizontal diversification had a matrix structure, and two operated in a networked organization (one pursued horizontal diversification, and the other one both horizontal and concentric). In

companies revealing vertical diversification, line and staff structures prevailed, and in some cases divisional or process structures were identified. Companies using concentric diversification more often chose functional and divisional organizational structures.

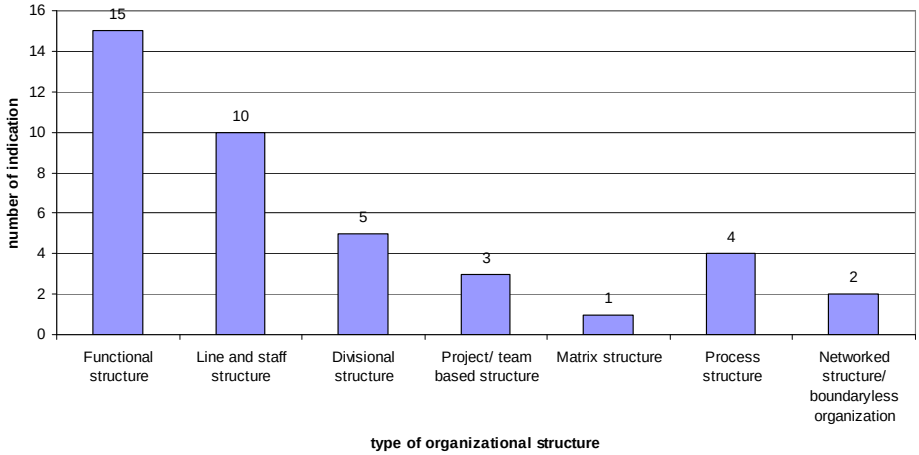

Figure 4.3. Type of organizational structure in the diversified companies studied

Source: Own research

Table 4.12. Type of the organizational structure and diversification strategy in the diversified companies studied

Type of the organizational structure	Related diversification						Unrelated - conglomerate diversification	
	Horizontal integration		Vertical integration		Concentric diversification			
	N	%	N	%	N	%	N	%
Functional structure	15	37,5	0	0	3	7,5	0	0
Line and staff structure	9	22,5	3	7,5	1	2,5	0	0
Divisional structure	5	12,5	1	2,5	2	5	1	2,5
Project/ team based structure	3	7,5	0	0	0	0	0	0
Matrix structure	1	2,5	0	0	0	0	0	0
Process structure	4	10	1	2,5	1	2,5	1	2,5
Networked structure/ boundaryless organization	2	5	0	0	1	2,5	0	0

***N** – number of companies* ***%** - the percentage of the group (40=100%)*

Source: Own research

Respondents were also asked to assess selected structural factors on a 1-5 scale, 1 meaning that a given factor was unimportant, and 5 that it was a key factor determining the organizational structure of the company. Survey results are presented in Table 4.13.

Table 4.13. Conceptual variables in the diversified companies studied

Conceptual variables	Total			
	$\bar{x}$	Sd	M	Kr
strategy	3,78	0,97	4	1
size	3,50	0,99	4	1
degree of production diversification	3,55	1,01	4	1
technology	4,13	1,07	4	1
tradition	2,85	1,31	3	2
economic and financial conditions	3,73	0,88	4	1
employees' qualifications	4,00	0,78	4	1
managers' view	3,58	1,15	4	1
organizational form and degree of independence	3,73	0,75	4	1
government policy	2,73	1,36	3	2
trade	3,78	0,99	4	1
territory of performance	3,50	1,13	4	1
customer' requirements	4,18	1,08	4	1

$\bar{\mathbf{x}}$ - average **S**- standard deviation **M**- median **Q** – interquartile range

Source: Own research

Data in the table show that, according to respondents, most factors were significant to organizational structures of companies. The most important determinants included: customer requirements, which is an environmental factor (average grade was 4.18), technology (4.13), employee qualifications (4.0), kind of business activity – sector (3.78), strategy (3.78), economic and financial conditions (3.73), and type of organization and degree of independence (3.73). This seems to be confirmed not only by relatively high mean values (in all cases over 3.7), but also a median of 4, which means that 50% of respondents believed that the above-mentioned factors were very relevant to organizational structures. Furthermore, low standard deviations and interquartile range (Q=1) mean that respondents' answers were rather uniform. Other significant factors included the degree of manufacturing diversification and management views (with a median of 4 and a mean of approx. 3.5). The least significant determinants of organizational structure were governmental policy (with a median of 3). However, in the case of these factors, respondents had the most diversified opinions. For some this factor was quite important, while for others it did not matter, which is shown by an interquartile range of 2.

In order to determine correlations between particular structural factors in the companies studied, a Pearson correlation analysis was carried out. Its results are presented in Table 4.14.

Table 4.14. Correlations between particular structural factors in the diversified companies studied

Lp.	Conceptual variables	2	3	4	5	6	7	8	9	10	11	12	13
1	strategy	0,20	0,36	0,35	0,32	0,23	0,20	0,14	0,47	0,15	0,24	0,57	0,18
2	size		0,13	0,18	0,18	0,16	0,00	0,17	-0,12	0,18	0,25	0,37	-0,11
3	degree of production diversification			0,05	0,43	0,03	-0,13	-0,08	0,17	-0,02	-0,05	0,11	0,33
4	technology				0,34	0,34	0,28	0,17	0,20	0,45	0,08	0,46	0,31
5	tradition					0,25	0,27	0,38	0,04	0,35	0,15	0,38	0,45
6	economic and financial conditions						0,52	0,24	0,23	0,37	0,54	0,17	0,16
7	employees' qualifications							0,26	0,26	0,41	0,49	0,23	0,21
8	managers' view								-0,02	0,37	0,34	0,23	0,16
9	organizational form and degree of independence									0,02	0,12	0,23	0,25
10	government policy										0,50	0,46	0,24
11	trade											0,44	0,25
12	territory of performance												0,31
13	customer' requirements												

r > = |0,31| significant for p min. < 0,05

Source: Own research

The data presented shows that for the most part the correlations are positive and statistically significant ($p<0.05$). The highest correlations occur between: strategy and the region of company business (correlation coefficient $r=0.57$), economic and financial conditions and sectors ($r=0.54$) as well as employee qualifications ($r=0.52$), and governmental policy and sectors ($r=0.50$). The high levels of these correlations mean that if a given structural factor was perceived to be important (or unimportant) to the creation and transformation of the organizational structure of a company, then the other correlated factor was assessed in the same way, that is, also as important (or unimportant). On the other hand, the lowest level of correlation (albeit still statistically significant) was revealed by the following: strategy and tradition ($r=0.32$), as well as customer requirements and technology and the business region ($r=0.31$). That means that if respondents found strategy or customer requirements to be key factors determining organizational structure, then in many instances tradition (in the case of strategy) as well as technology and the business area (in the case of customer requirements) were also considered quite important. What is surprising is a negative (albeit not statistically significant) correlation between a company's size and its type of organization and the degree of independence. It would seem that these factors are closely related; however, respondents who found one of them important regarded the other one as insignificant, and vice versa.

A closer analysis of the features of organizational structures (Tables 4.15-4.16) reveals that the functional criterion of the division and grouping of tasks prevailed, which is confirmed by the fact that the functional structure was the most popular. The growth method pursued turned out not to be very important. However, 16 companies that diversified on the basis of cooperation with other companies for the most part decided to pursue several strategic alliances at a time. The greatest number of alliances in this group of companies was established in terms of distribution or sales of products (8 entities), launching a new product into the market (8 companies) and the preparation and implementation of marketing strategies (5 entities). Diversified companies built their competitive advantage using several skills and resources at the same time. Mergers effected by 4 companies were mostly pursued by horizontally diversified entities, while takeovers (in 5 entities) by companies with vertical and concentric diversification.

The technological criterion of division and grouping of tasks occurred more often in companies that were diversified with an internal growth method, while the product-based criterion in companies with mixed growth.

In terms of the type of coordination, the companies studied primarily made use of the simplest mechanisms such as hierarchy, rules and procedures. Coordinator positions were created in very few entities, mostly those developing on the basis of their own resources. Similarly, few companies made use of horizontal and personal coordination mechanisms, which was probably due to their relatively small range of diversification (horizontal diversification prevailed).

Table 4.15 Division and grouping of tasks and coordination mechanisms in the companies studied

Method of division and grouping of tasks	Total		Diversification – growth method			
			Internal		Internal and external	
	N	%	N	%	N	%
pertaining to the realization of certain tasks and functions (functional)	31	77.5	20	50	11	27.5
used in the context of a particular product (product-based)	9	22.5	3	7.5	6	15
resulting from a technological process (technological)	13	32.5	8	20	5	12.5
dependent on the type of customers (by customer group)	7	17.5	5	12.5	2	5
dependent on localization (by region)	5	12.5	3	7.5	2	5
dependent on processes conducted (process-based)	2	5	1	2.5	1	2.5
Type of internal coordination						
vertical (hierarchy, superior-subordinate relationship)	22	55	12	30	10	25
process-based (standardization, procedures, rules)	14	35	8	20	6	15
horizontal (grouping people into task or project teams)	7	17.5	5	12.5	2	5
personal (participation, directives), mutual agreement, consensus	7	17.5	3	7.5	4	10
coordinator positions	5	12.5	4	10	1	2.5

***N** – number of companies* ***%** – percentage of the group (40=100%)*

Source: Own research

Table 4.16 Assessment of the degree of centralization and formalization in the companies studied

	Degree of formalization					
Degree of centralization	very high formalization	high formalization	medium formalization	very low formalization	low formalization	**Total**
very high centralization	6	4	5	4	1	**20**
high centralization	0	0	0	0	0	**0**
medium centralization	2	6	1	1	0	**10**
high decentralization	1	0	1	0	0	**2**
very high decentralization	0	7	1	0	0	**8**
Total	**9**	**17**	**8**	**5**	**1**	**40**

Source: Own research

Thus, a relatively high degree of decision-making centralization was revealed in half of the companies studied. On the other hand, however, in 20% of entities, the division of power was found to be highly decentralized. A high degree of centralization as well as decentralization was accompanied by a high level of formalization. Only in 5 companies was formalization declared to be low, that is, characterized by a very small number of documents, rules, or procedures.

In summary, the companies studied that pursued diversification strategies employed rather classical structural solutions of a functional nature. Only few companies had more flexible and modern structures of the divisional or matrix type, which are most adequate for a diversification strategy. Therefore, it seems that the managerial staff of those companies should consider thorough organizational changes that would allow them to adapt faster and better to the constantly changing environment, especially since the environment was the most important structural factor according to respondents.

4.4. Restructuring

Restructuring is a process caused by elements of the environment, being a reaction to external and internal factors critical to the company's development. The objective of this process is to create a competitive company and achieve organizational, production, economic and technical adaptation. Sometimes it is also changes in the legal or proprietary status that are the subject of restructuring action. Improvements in efficiency, development or marketable survival are some of the basic purposes of a company's restructuring.

Restructuring can occur for numerous reasons: market conditions and competitiveness (downsizing or rightsizing, rationalization and cost – cutting), drive towards internal improvement (efficiency and effectiveness, decentralization or centralization, flattening of the hierarchy), strategy implementation (change in strategy, merger and acquisition, new product and service, cultural change, internal market re-alignment), leadership decision (change of senior manager), unforeseen/ unplanned change (internal or external crisis).[110]

A well-prepared and initiated program of restructuring may bring about a number of positive results, including: making better use of the company's assets, cost reduction, better utilization of employees' skills and qualifications, increased employee efficiency, higher company effectiveness and profitability, inflow of new technologies and company development. On the other hand, the restructuring process bears numerous consequences for the employees' environment. First of all, the effects of this process are connected with staff reduction and conversion (to counter overgrowths and an improper employment

[110] E. Cameron, M. Green: *Making Sense of Change Management*, Kogan Page, London 2004, p.166

structure) and changes in human resource management (the system of employee evaluation, motivation and training).

By restructuring some authors mean redesigning an organizational structure with the intent of emphasizing and enabling activities most critical to the firm's strategy to function at maximum effectiveness.[111] In this meaning it refers to managerial efforts to reorganize or change an organization's structure in the attempt to increase productivity and otherwise improve performance. Restructuring often is associated with downsizing and other efforts to streamline operations as part of a corporate turnaround strategy. Turnaround strategies are usually used when a business worth rescuing goes into crisis. The objective is to arrest and reverse the sources of competitive and financial weaknesses quickly as possible. There are five ways to pursue business turnaround: revise the existing strategy, launch efforts to boots revenues, pursue cost reduction, sell of assets to raise cash to save the remaining part of the business, use a combination of these efforts.[112]

Thus, a restructuring strategy functions at the level of the company as a whole and is focused on changes that may rescue a company in a crisis or contribute to its growth. Therefore, there are two subtypes of restructuring: **a repair strategy and a dynamic (development strategy).**[113] The former is focused on reorganizing the company in face of some inefficiencies or operating failures. On the other hand, it is supposed to create mechanisms that would safeguard the company against potential external and internal disturbances. It is a response to a crisis and the poor condition of the company, and its objective is to turn around these negative tendencies and save the company from bankruptcy. The other type of restructuring strategy – a dynamic strategy – is a kind of development strategy connected to product and/or market innovations. In this sense, it produces changes in all the areas of a company's activity. It is a process of continuous improvement in the company's organization, managerial staff and employees, streamlining work and production, and ensuring better product quality.

Therefore, a restructuring strategy involves a range of various changes that are meant to create the most flexible infrastructure possible in the company.

In terms of organization, the following types of changes may be identified:[114]

- creating new entities from existing company units (holding structures);
- creating new divisions and organizational units;
- introducing a new (usually simpler) organizational structure;
- streamlining the company's information system;
- computerization, planning and programming further development.

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[111] J.A. Pearce, R. B. Robinson, Jr.: *Strategic…* op.cit., p.340

[112] A.A. Thompson Jr., A.J. Strickland III: *Strategic* …. op.cit., p.154

[113] A. Stabryła: *Zarządzanie strategiczne*….. op.cit., p.59

[114] R. Borowiecki, A. Nalepka: *Restrukturyzacja w procesie funkcjonowania i rozwoju przedsiębiorstw* in *„Zarządzanie restrukturyzacją procesów gospodarczych. Aspekt teoretyczno – praktyczny"*, R. Borowiecki (ed.), Difin, Warszawa 2003, s. 87.

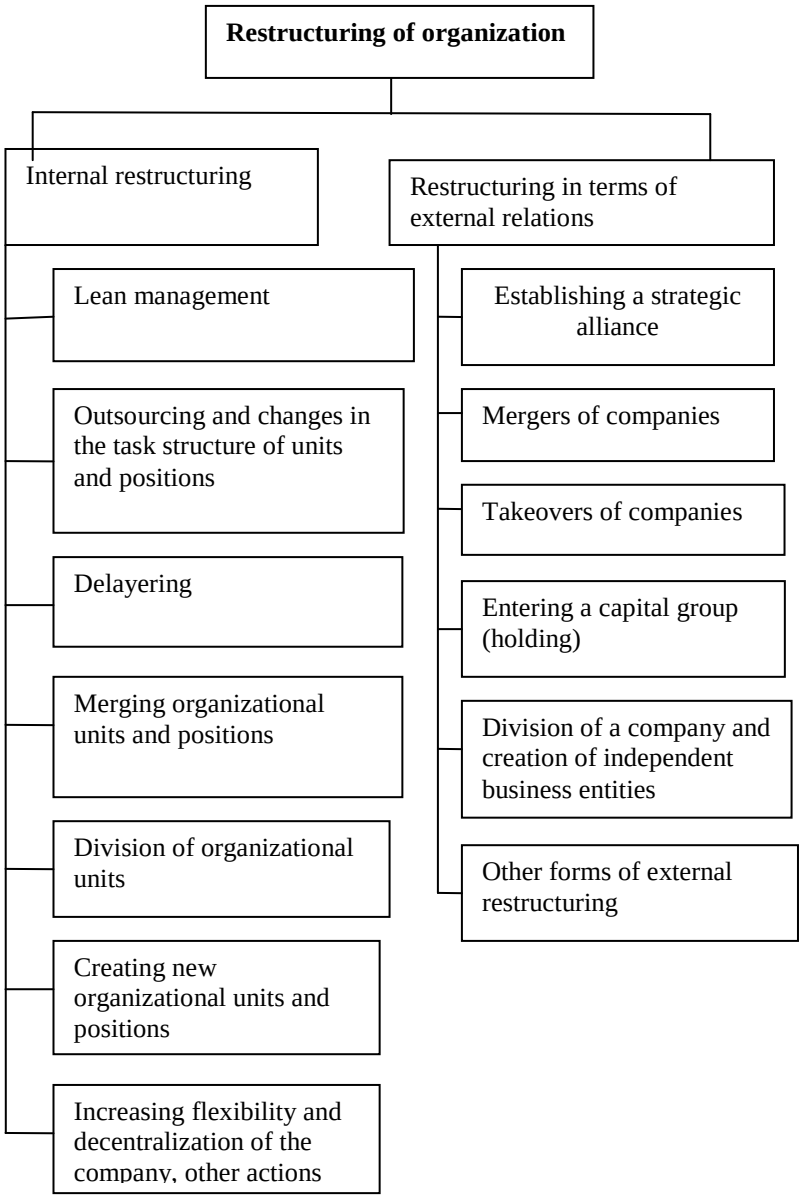

Figure 4.4. Types of organizational restructuring of companies
Source: S. Lachiewicz, A. Zakrzewska – Bielawska, *Miejsce restrukturyzacji organizacyjnej i kadrowej w procesie przekształceń polskich przedsiębiorstw* in *Restrukturyzacja organizacji i zasobów kadrowych przedsiębiorstwa*, S. Lachiewicz, A. Zakrzewska – Bielawska (eds), Oficyna Ekonomiczna, Kraków 2005, p. 39

Organizational restructuring for the most part involves processes and relationships connected to the organizing function, which is reflected in the organizational structure and actions following from it. However, in terms of

organizational restructuring processes, one should also consider external organizational relations which influence the company's structure in larger configurations such as: alliances, mergers or holdings. Therefore, organizational restructuring can be subdivided into: internal restructuring involving radical changes occurring within internal organizational relations and restructuring in terms of external organizational relations. Particular kinds of actions in these two areas are shown in Figure 4.4. In this context, organizational restructuring involves ensuring efficient company management and facilitating coordination and organizational order for restructuring changes occurring in other areas of the company's activity.

The companies studied (Sample 1 and 2) undertook restructuring primarily due to: increasing national and international competition, an excessive workforce and/or too high labour costs, changes in customer expectations and the need to introduce new products, excessive fixed assets and related financial burden, and insufficient marketing activities. Another reason was also the necessity to change organizational structures, as respondents stated that they were too large, inflexible and inert.

Restructuring strategies in the studied companies involved a number of changes in various areas. However, this work presents only those research results that pertain to actions aimed at the modernization of existing organizational structures and their adjustment to market standards typical of modern economies.

Changes made to the organizational structures of the companies studied primarily involved substantial reductions and delayering. A number of actions changing the structure and configuration of organizational structures were carried out. They are presented in a synthetic manner in Figures 4.5 and 4.6.

The largest-scale actions taken in both groups of companies were liquidations, mergers and the creation of some new organizational units as well as working positions. In Sample 1, 95% of respondents quoted reductions in the number of administrative jobs, and 78.5% reductions in managerial positions. Half of the studied companies liquidated the positions of so-called "independent specialists". In terms of liquidated organizational units, the greatest number of dismantled units included: staff rooms and personnel facilities (40% in Sample 1 and 32.1% in Sample 2), some manufacturing plants (24.6% and 39.3%, respectively) and maintenance staff (20% and 28.6%). Among newly created units (revealed by 60% of respondents from Sample 1 and 56% from Sample 2), marketing, controlling and IT departments prevailed. It should be noted, too, that the creation of a strong marketing department and expansion of a sales network was undertaken by 74% of the studied companies from Sample 2, which was usually related to the fact that Polish companies tended to transform from production-oriented to market-oriented. The most frequent merger types included financial and accounting departments (32.1% of Sample 2), various payroll and employee-related units into one human resources department (29.8%) and production divisions (16.9% of Sample 1).

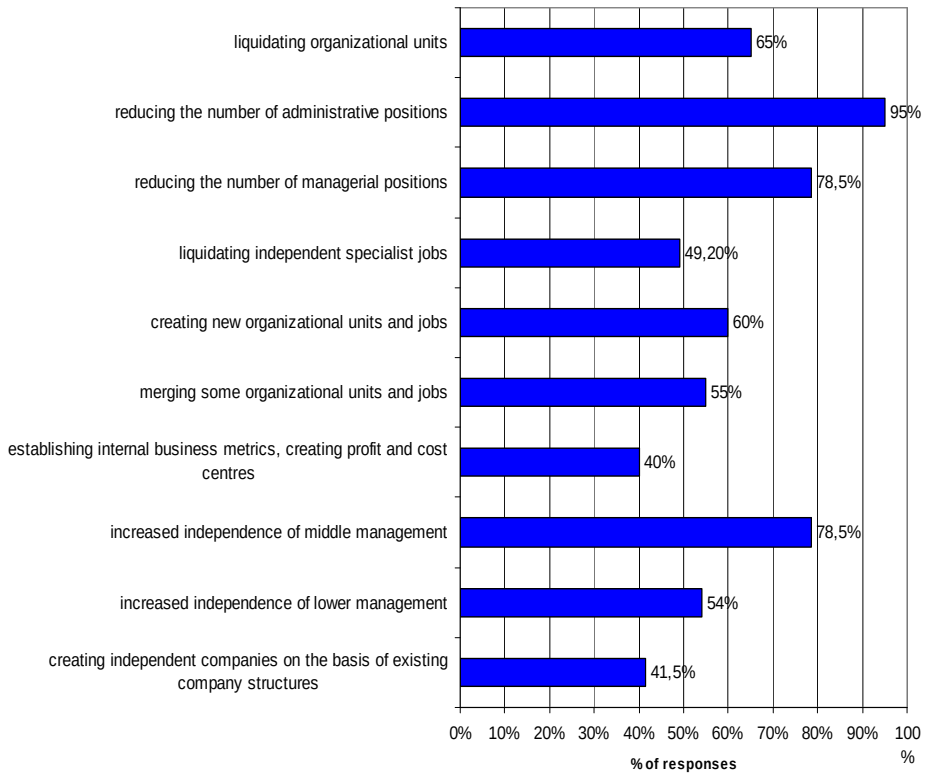

Figure 4.5. Changes in the organizational structure of the companies studied (Sample 1)

Source: Own research

Most respondents (70% of Sample 2) also quoted the use of outsourcing. The most frequently outsourced processes included: transport (over 30% in both samples), non-core activities, e.g. cleaning, security (over 20%) and other semi-production activities (about 20%). Approximately 40% of respondents in all the companies studied observed the introduction of internal business metrics (profit and cost centres), which improved the efficient management of companies' assets, reduced bureaucracy and increased the transparency of the processes of creating value added in particular units as well as the transparency of interrelationships between them.

Most companies increased the degree of independence of lower ranking managers, and especially of middle management (78.5% of respondents from Sample 1 mentioned such a change). This means that the studied companies intended to decentralize management.

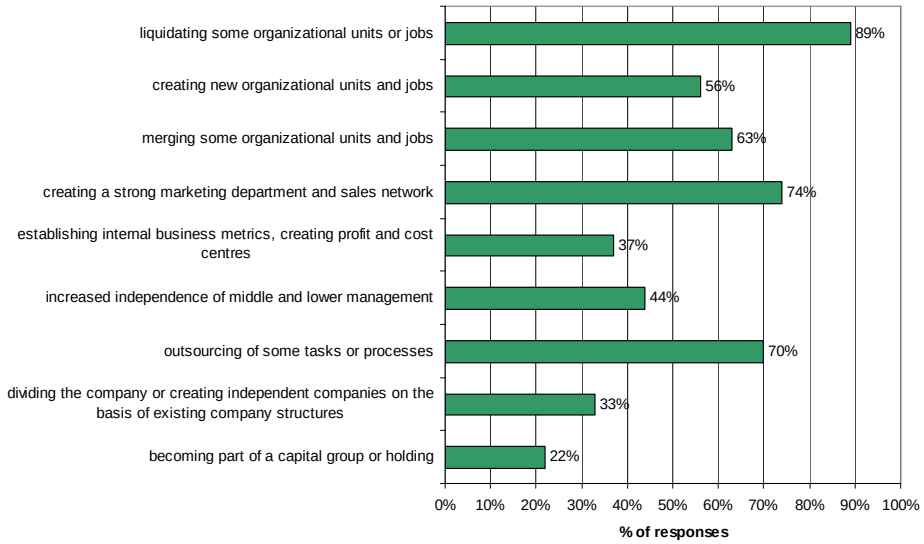

Figure 4.6. Changes in the organizational structure of the companies studied (Sample 2)

Source: Own research

Nine companies from Sample 2 divided or sold part of their operations. This resulted from restructuring actions in other areas (in 50% of the companies), outsourcing (37.5%) or product/market differences (12.5%). Six companies from this sample became members of capital groups of holding companies.

Changes made to the organizational structures of the companies studied increased their flexibility and efficiency. Respondents' assessment of selected results of organizational changes is presented in Table 4.17. The data show that all the results of organizational changes in Sample 2 and most of them in Sample 1 were important or very important for the companies. This is visible in the medians, which are 4 for every result, and very low values of interquartile ranges, which means that assessments were quite uniform. In terms of average (mean) values, the highest valued results of restructuring in Sample 1 was reducing costs of operation (3.89) and increasing the efficiency of management (3.76). Other highly regarded results included the increased efficiency of employees (3.68) and higher efficiency and profitability of the company (3.5). Better use of employee qualifications and skills as well as higher employee motivation for work and professional development were less important, according to respondents. However, it needs to be stressed, that in assessing these last results of restructuring, respondents' answers were most varied, with the median being 3. This means that the same number of companies perceived these results as clearly visible and as non-existent.

Table 4.17. Results of organizational changes in the companies studied [115]

No.	Results of organizational changes	$\bar{x}$	S	M	Q
Sample 1 – 65 companies					
1	increased management efficiency	3.76	0.87	4	1
2	reduction of costs of operation	3.89	0.82	4	1
3	increased employee efficiency	3.68	0.82	4	1
4	higher efficiency and profitability of the company	3.50	0.91	4	1
5	better use of employee qualifications and skills	3.41	0.90	3	1
6	higher employee motivation for work and professional development	3.25	0.80	3	1
Sample 2 – 27 companies					
1	increased management efficiency	3.81	1.21	4	2
2	reduction of costs of operation	4.18	1.11	5	1
3	increased work efficiency and company efficiency	3.85	1.16	4	1
4	ensuring high quality products and services	3.70	1.29	4	2
5	better information flow	3.81	1.21	4	2
6	more efficient coordination of activities	3.51	1.31	4	1

$\bar{x}$ – mean S – standard deviation M – median Q – interquartile range

Source: Own research

Respondents from Sample 2 highly valued, apart from cost-cutting, also other results of restructuring activities. On the other hand, the lowest valued result was "more efficient coordination of activities", which means that changes in the organizational structure of those companies should be continued. Certain differences have been revealed in the analysis of the significance of particular results in Sample 2 in relationship to privatization. In privatized, companies the results of organizational changes were evaluated higher than in companies that were not privatized. This means that organizational changes combined with proprietary transformations produced better results in the studied companies than organizational restructuring alone. Furthermore, in companies where privatization was conducted in an indirect manner the majority of the above-mentioned results were valued higher than in companies where privatization was indirect.

In terms of correlations between particular results of restructuring activities in both samples, it appears that most of them are positive and statistically significant, which is shown in Tables 4.18 and 4.19.

[115] Respondents were asked to assess particular results of organizational changes on a five-point scale (1 meaning little change, and 5 substantial change)

Table 4.18. Correlations between particular results of the restructuring process (Sample 1)

		Results of the restructuring process				
No.	**Results of the restructuring process**	**2**	**3**	**4**	**5**	**6**
1	Increased management efficiency	0.44	0.36	0.46	0.49	0.22
2	Reduction of costs of operation		0.46	0.36	0.16	0.01
3	Increased employee efficiency			0.58	0.36	0.17
4	Higher efficiency and profitability of the company				0.31	0.11
5	Better use of employee qualifications and skills					0.49
6	Higher employee motivation for work and professional development					

Note: r = > |0.31| are significant at min. p < 0.05

Source: Own research

Table 4.19. Correlations between particular results of the restructuring process (Sample 2)

		Results of the restructuring process				
No.	**Results of the restructuring process**	**2**	**3**	**4**	**5**	**6**
1	increased management efficiency	0.57	0.63	0.60	0.58	0.57
2	reduction of costs of operation		0.47	0.23	0.46	0.51
3	increased work efficiency and company efficiency			0.76	0.44	0.53
4	ensuring high quality products and services				0.43	0.41
5	better information flow					0.86
6	more efficient coordination of activities					

Note: r = > |0.41| are significant at min. p < 0.05

Source: Own research

Data shown in Table 4.18 mean that the most correlated results include: increased employee efficiency and higher company efficiency and profitability (r=0.58) as well as better use of employee qualifications and skills and increased efficiency and higher employee motivation for work and professional development (r=0.49). Therefore, one could argue that the restructuring process brought about the intended results in the companies studied and streamlined company management. On the other hand, the lowest level of correlation was

observed between higher company efficiency and profitability and better use of employee qualifications and skills (r=0.31). This implies that the effected changes did not always allow the employees to make full use of their qualifications.

In terms of correlations of particular results of restructuring in Sample 2, the most correlated factors included: better information flow and more efficient coordination of activities (r=0.86), which means that the more streamlined an organizational structure was (achieved by better integration of units and activities), the shorter the time of information flow between particular organizational units and hierarchy levels. Therefore, the decision-making process was accelerated, which in turn led to more flexible organization and facilitated faster reactions to opportunities and threats occurring in the environment. Another close correlation was observed between increased work efficiency, efficiency of company operations and ensuring high quality products and services (r=76). On the other hand, the least correlated factors included ensuring high quality products and services and more efficient coordination of activities, which again means that coordination should be improved in the studied companies.

Restructuring results are characterized by the fact that their size, scale and area are largely dependent on the kind of restructuring and its scope. Due to the fact that in most of the companies studied restructuring was undertaken in face of a crisis, the results were focused for the most part on stability, with activities aimed at regaining their lost efficiency.

In summary, the companies studied were most likely to undertake the following restructuring actions: reduction in the number of managerial and administrative positions, liquidation of non-core organizational units, the creation of new units and work positions that had been previously underestimated (e.g. marketing departments), and the introduction of internal business metrics and outsourcing.

Despite a variety of (mostly external) obstacles that cropped up in the course of the implementation of the restructuring process, it was the only chance of survival and further development for many large companies. This is reflected in the results of the effected changes, the most important ones being reduction of costs of operation and increased management efficiency.

SUMMARY

Organizational structure understood as a configuration of the constituent elements and job positions of a company and correlations between them, and also as a set of rules and patterns describing and defining the behaviour of its participants narrows the scope of strategic changes in companies. A company's organizational structure evolves over time and undergoes modifications as the company develops and the complexity of its organization, environment and tasks increases. However, an organizational structure always provides a core framework which reduces uncertainty and streamlines decision-making processes, also fulfilling many other important functions in companies.

A multi-dimensional approach to designing organizational structures implies the existence of certain features that characterize both a structure as a whole and its particular dimensions, such as specialization, configuration, centralization, coordination and formalization. The appropriate choice of these features decides the character of the whole structure, constitutes the basis for synergy and determines the effectiveness of the company's operations. However, it should be noted that there do not exist any universal solutions for designing organizational structures due to the relativity of interrelationships between the particular dimensions of organizational structures and from the changeability of external and internal conditions in which organizations operate. The optimal design for a particular company depends on many factors, e.g.: its objectives, strategy, personnel, organizational culture, technology, environment, age and size, etc. These factors in various ways and to various degrees determine the organizational solutions of a company. Moreover, their impact and character alter with time, thus implying the necessity of constant changes in the organizational structures.

Among other structure-generating factors, an important role is played by a company's development strategy. On the one hand, the change of a strategy calls for adequate changes in the management structure and processes and, on the other hand, an existing structure may facilitate and speed up (or hamper and slow down) the change of a strategy. A company's structure and management processes should be devised in such a way as to increase its potential and help to use its resources not only in the short term but also in the long term.

The companies studied implemented three types of development strategies: single-business concentration strategies, diversification strategies and restructuring strategies. In all the groups, technology, besides strategy, was

identified as a vital determinant of the organizational structure, no doubt due to the manufacturing character of the companies.

The organizational structures of companies that pursued concentration strategies were mainly of a functional nature. Tasks were mainly divided and grouped according to functions and stages of the technological process, and coordination was based on hierarchy. Furthermore, tasks were highly centralized and formalized.

In diversified companies there also prevailed organizational structures of a functional nature. Only a few of the companies studied had flexible modern structures of the divisional or matrix type which would be suited to the strategy of diversification. It seems, though, that even such companies should introduce changes to their organizational solutions so that they could efficiently function in an increasingly complex and volatile environment.

The organizational structures of companies implementing restructuring activities became leaner, mostly due to the fact that restructuring was often used as a remedy to a crisis. Consequently, the most frequently adopted measures involved reducing the number of managerial and administrative positions, eliminating non-core organizational units, creating new units and job positions, establishing internal metrics and making use of outsourcing.

The direction of changes in organizational structures depends on the adopted development strategy. On the other hand, an effective implementation of a company's strategy depends on its structural and procedural ability. Therefore, in order to achieve maximum efficiency of the company, senior management has to make sure that these two elements fit together well.

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