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Design Structure to Fit Strategy

LEX DONALDSON

The organizational structure should be designed to fit the organizational strategy. This is the Principle of Designing Structure to Fit Strategy – the meta-principle of effective organizational structure.

This is a broad idea. However, there are sub-principles that follow from the meta-principle, which turn the broad idea into useful prescriptive guidance. The sub-principles make the principle of designing structure to fit strategy specific and actionable. By following these sub-principles, organizations can build structures that maximize their effectiveness.

The structure of an organization is the set of relationships between its members, such as who reports to whom on the organization chart or whether there is a “no smoking” rule. An organization coordinates the actions of its members in order to attain a goal (Scott, 1992). The strategy of an organization is its future intention of how it will attain its goals given its situation. The organization should adopt a structure that helps it to attain its goals and thereby promotes organizational effectiveness.

The structure that is most effective for an organization is one that fits its strategy (Chandler, 1962). Strategy determines the levels of four contingency factors: organizational size, innovation, diversification, and geographical diversity. These contingency factors, in turn, determine the nature of the tasks that confront members of the organization. Tasks can themselves vary on two dimensions: uncertainty and interdependence. Task uncertainty and task interdependence determine the mechanisms required to coordinate effectively the tasks. These coordination mechanisms underlie the different types of structure that are required to fit the strategy. The causal chain is: strategy, contingencies, task, coordination mechanisms, and structure. We will begin by outlining the coordination mechanisms and then discuss strategy, contingencies, and structures.

COORDINATION MECHANISMS

Task uncertainty and coordination mechanisms

Each organizational member needs to know what he or she should do in order to accomplish his or her task, so that their task dovetails with that of those being performed by other members. Coordination can be attained by either rule, plan, hierarchy or mutual agreement. Which of these coordinating mechanisms should be used depends upon the level of task uncertainty. Task uncertainty is the degree of predictability that working in a certain way will successfully accomplish the task. The coordination mechanism that is most effective is the one that fits the level of task uncertainty.

Rules state what should occur in each specified situation. A rule states that, if X occurs, then Y should be done, e.g., "If an employee is 15 minutes late then he or she will be fined for one hour's pay." Broadly understood, rules include standard operating procedures and written instructions for performing the task. They are also present in computerization and automation, and compose the software and hardware of these systems (Blau and Schoenherr, 1971). Thus rules are really part of the programming of decisions. Any particular case is decided by a framework that pre-exists that case. This allows the decision to be made quickly, without reflection or discussion. There is no necessity for involvement by a manager, so a member may simply follow the rule. A clerk can administer the rule. Thus rules economize on managers and allow delegation to lower-paid members (Blau and Schoenherr, 1971). A rule applies the same across all cases, so that rules foster consistency. This also means that rules treat every organizational member or client the same and so can be perceived as fair and equitable. However, a disadvantage of rules is that they are quite inflexible, in that whenever X occurs, then Y is prescribed - even though the situation may have changed so that Y is no longer useful. Therefore, rules are appropriate where the task is low on uncertainty, so that the when they were set they correctly anticipated future situations (Galbraith, 1973). Thus *rules fit low task uncertainty*.

Plans involve constructing a schedule of which member will do what and when. Plans can be flexible by being updated periodically as the situation changes. In this way, plans are appropriate where the task is less certain than for rules. Thus *plans fit quite low task uncertainty*.

Hierarchy uses managers to direct activities of their subordinates. By exercising judgment, managers achieve some flexibility in their decision-making, but managerial involvement is expensive because of their relatively high compensation and benefit costs. Where task uncertainty is medium then hierarchy should be used. Thus *hierarchy fits medium task uncertainty*.

Mutual agreement means that members agree among themselves who will do what and when. It relies upon the personal commitment of the members to the goals of the organization, or at least to the accomplishment of their tasks. By participating in decisions, members have increased understanding of what is required of them and tend to be more committed. Participation tends also to increase the quality of the decision by using the experience and initiative of members, and also saves the costs of supervision (Likert, 1961). However, mutual agreement has its own costs, in that it is a time-consuming process, because members have to resolve at the start of each time period

who is going to do what. Mutual agreement should be used where task uncertainty is high. High task uncertainty makes it difficult for managers to know what is best, because of their limited expertise. This tends to lead organizations to hire educated people, such as professionals, who self-manage through mutual agreement (Hage and Aiken, 1970). Thus *mutual agreement fits high task uncertainty*.

The sub-principle of task uncertainty is:

- ◆ Tasks low on uncertainty should be governed by rules.
- ◆ Tasks somewhat low on uncertainty should be governed by plans.
- ◆ Tasks medium on uncertainty should be governed by hierarchy.
- ◆ Tasks high on uncertainty should be governed by mutual agreement.

Task interdependence and coordination mechanisms

Task interdependence refers to whether two tasks are connected and, if so, how intensively the tasks interact. The more intensive the connection between any two tasks, the greater the coordination that is needed. To facilitate coordination, organizational sub-units that are more interdependent should be placed closer together in the organizational hierarchy (Thompson, 1967). From the top of the hierarchy down, tasks are grouped according to their interdependence with one another, which defines organizational sub-units at each level. At the top of the hierarchy, reporting to top management are placed tasks that have no direct interdependence on each other, such as divisions whose products are unrelated to each other (this is termed pooled interdependence). At the next level down in the hierarchy are placed tasks that are moderately interdependent, such as where the product made by the manufacturing department becomes the input for the marketing department (this is termed sequential interdependence). At the bottom level in the hierarchy are placed tasks that are highly interdependent, such as milling and boring operations in a job shop, between which a product moves back and forth numerous times as it is fabricated (this is termed reciprocal interdependence).

The sub-principle of task interdependence is:

- ◆ The greater the interdependence between tasks, the greater their coordination needs to be and so the closer they should be located in the organizational hierarchy.

Thus the coordination mechanisms that should be used to structure an organization are set by task uncertainty and task interdependence. The tasks of an organization are set, in turn, by its strategy, as we shall now see. Thus strategy determines the tasks that determine the optimal structure.

STRATEGY

At least five different strategies may be distinguished: differentiation, innovation, low cost, market expansion, and risk reduction. Strategy affects the organization on four dimensions: size, innovation, diversification, and geographical diversity. These four dimensions are known as contingency factors because high organizational performance

depends on fitting the organizational structure to each of them. Size is the number of people being organized; it relates to scale and is sought in a low-cost strategy. Innovation refers to materials, processes or outputs that are new to the organization and is sought in innovation or differentiation strategies. Diversification is producing services or products that are different from each other; the more different the services or products, the greater the diversification of the organization; it is sought in market expansion or risk reduction strategies. Geographical diversity is having different localities operate independently of each other; it is sought in market expansion or risk reduction strategies. Whenever an organization alters its strategy this tends to cause changes in one or other of the four contingency factors, i.e., in the levels of innovation sought or size or diversification or geographical diversity. Changes in one or other of these four contingency factors cause changes in task uncertainty or task interdependence. In this way, changes in strategy indirectly lead to changes in task uncertainty or task interdependence. Given that task uncertainty and task interdependence require particular structures, strategy ultimately drives the structural designs needed for effectiveness.

Specifically, increasing size decreases the uncertainty of many organizational tasks by making them more repetitive, leading to formalization. Increasing innovation increases task uncertainty, by requiring the solving of novel problems. Increasing innovation also increases task interdependence, because the various functional departments, such as research and manufacturing, have to interact to solve these novel problems. Increasing diversification and geographical diversity decreases task interdependence, because the different products or services or localities operate independently of each other. A consideration of each of these four contingency factors makes specific the organizational structures required to fulfill the meta-principle that structure must be designed to fit strategy.

Size

The volume of work performed by an organization, such as the numbers of products to be produced or customers to be served, affects the number of people required to perform it and thereby the size of the organization (i.e., the number of its members) (Blau and Schoenherr, 1971). In turn, organizational size determines the appropriate levels of specialization, formalization, hierarchy, and decentralization.

Size and specialization. Tasks need to be distributed among members so that each specializes in a certain task. This is to avoid the confusion of everybody trying to do the same thing at the same time, such as serving the same customer or operating the same equipment. Specialization also has the advantage that a member can become more expert in that task by repeatedly performing it. Also, for highly specialized tasks, their simplicity allows them to be performed by members who have little education, experience or training. This makes filling that role easier and allows lower pay. Thus the higher skill and lower cost advantages of specialization promote organizational efficiency.

The sub-principle of specialization is:

- ◆ The larger the organization, the more specialized should be the work of each member.

Size and formalization. Increasing size means that some tasks, such as hiring employees or paying wages, are done repeatedly. Specialization also means that a member performs the same task repeatedly. Such repetition increases familiarity with the task and so reduces task uncertainty. This allows the task to be codified in rules, regulations, and standard operating procedures, which is referred to as formalization. Thus size increases formalization which promotes efficiency because of the increased programming of decisions (as discussed earlier). In contrast, an organization that fails to increase formalization as it grows in size is relying on more costly forms of coordination, such as the managerial hierarchy and so is being inefficient.

The sub-principle of formalization is:

- ◆ The larger the organization, the more formalized it should be.

Size and hierarchy. The height of the hierarchy is affected by the span of control, that is, the number of members who are direct subordinates of each manager. As organizational size increases, the span of control increases for a manager until it becomes too wide. At this point a new intermediary level has to be introduced into the hierarchy between the manager and his or her erstwhile direct subordinates. In this way size leads to an increase in hierarchical levels, in order to avoid the breakdown in coordination that would occur if spans of control were too wide.

The sub-principle of hierarchical levels is:

- ◆ The larger the organization, the more hierarchical levels it should have.

Size and decentralization. Larger size promotes decentralization. A larger number of members and customers increases the number of issues requiring managerial decision. Thus size increases organizational complexity. This complexity means that decisions cannot all be centralized, so that decentralization must increase as complexity increases. Decentralization means that some decisions are taken at levels down from the top of the hierarchy. The more decisions that are delegated and the further down the hierarchy that they are delegated, the greater is the decentralization. This means that some decisions are being taken by lower-level managers who have more knowledge of the local situation, avoiding delays and also the distortions that would occur if all information had to be fed up the hierarchy for centralized decision-making. Moreover, decentralization gives lower-level managers some degree of autonomy that helps involve and motivate them.

The sub-principle of decentralization is:

- ◆ The larger the organization becomes, the more it should decentralize decision-making.

In sum, as an organization grows larger so it should increase its specialization, formalization, hierarchical levels, and decentralization.

Innovation

A high rate of innovation means that, within a time period, there are a large number of outputs or processes that are new to the organization. The opposite of innovation is routine operation, which leads to low task uncertainty, which, as we have seen, is effectively organized by rules set by the hierarchy. Also, knowledge is centralized at the top of the organizational structure, so that decisions about other, medium uncertainty tasks can be taken centrally. This kind of organizational structure, which features high formalization, centralization, and psychological dependence of members on the hierarchy, is referred to as a mechanistic structure. Mechanistic structures are effective for routine tasks, especially low uncertainty tasks (Burns and Stalker, 1961).

In contrast, innovation requires that novel problems be solved. This often requires hiring technical experts or professionals and encouraging them to use their initiative, based upon a broad understanding of their task or the organizational mission. Such organizational members tend to coordinate through mutual agreement. Knowledge is diffused throughout the organizational structure, thus rendering ineffective a high degree of centralization. This kind of organizational structure, which features use of initiative by members, mutual agreement, decentralization, and also low formalization, is referred to as an organic structure (Burns and Stalker, 1961). Organic structures are effective for high uncertainty, innovatory tasks.

There is a continuum of organizational structures running from highly mechanistic through to highly organic, with many organizations lying at intermediary positions. Correspondingly, organizations vary in the level of their innovativeness. The more innovative the organization wants to be, the more organic its structure has to be.

The sub-principle of innovation is:

- ◆ The greater the innovation rate sought, the more organic the organizational structure should be.

Within an organization there can be variations in the level of organicness from department to department or section to section. These stem from variations in the uncertainty of the tasks being performed by each department. For example manufacturing is often mechanistic, because much of its work is repetitive, whereas research is usually organic, because its work is solving novel problems (Lawrence and Lorsch, 1967). Thus, far from a homogeneous organizational culture, the organization contains divergent sub-cultures.

The sub-sub-principle of innovation is:

- ◆ The greater the task uncertainty of any organizational sub-unit, the more organic it should be.

Nevertheless, despite such differences between departments in the same organization, where one department is interdependent on another they must achieve coordination.

Coordination mechanisms for innovation. Innovation affects the mechanisms that should be used to coordinate the functional departments of an organization, through the effect of

innovation on task uncertainty and task interdependence.

Where the organization does not wish to innovate, then there may be no research department. The task interdependence between functions may be of the low-intensity, simple, sequential kind: the sales department places an order upon the manufacturing department, which makes it and passes it on to the delivery department. The coordination mechanism that is required for sequential task interdependence is planning, because there is limited task uncertainty. The uncertainty that exists mainly arises from variations in throughput volume over time. Where plans cannot be used because of more uncertainty, coordination can be achieved through use of hierarchy.

In contrast, where the organization wishes to innovate, then there will usually be a research department. The task interdependence between functions will be of the highly intensive, reciprocal kind. The research department may have an idea for a new product, but the marketing department must examine the demand and price, and the manufacturing department must examine the feasibility and costs. Therefore a discussion needs to occur back and forth between the functional departments. Because the content and interactions involved in these discussions are uncertain, planning cannot be used and hierarchy does not suffice. Each department must adjust to the other and so their coordination is *ad hoc* and through mutual agreement (Thompson, 1967). The discussion is made more difficult by the sub-cultural differences of style, language, time frames, and values between the departments. The organization should create inter-functional teams to bring representatives of the functional departments together to facilitate cooperation. These teams may further be assisted by integrators who can act as facilitators. Inevitably, conflicts arise between the different perspectives of the functions and these should be resolved by open confrontation, that is problem-solving discussion, rather than by using power or being evasive (Lawrence and Lorsch, 1967).

The sub-principle of interdependence is:

- ◆ Where innovation is not required, interdependence between functional departments should be handled by planning through the hierarchy. Where innovation is required, interdependence between functional departments should be handled by cross-functional teams, facilitated by integrators and resolving conflict through confrontation.

Diversification

If the organization is undiversified (e.g., it produces a single product), then its tasks are interdependent – manufacturing makes what research designs – and so the main organizational sub-units are functions. Thus an undiversified organization should have a functional structure. Increasing diversification, by offering more diverse products or services, decreases the interdependence among the tasks of creating and selling each of these different outputs. If an organization is diversified, e.g., producing both automobiles and shoes, each of these two products is unrelated and so will have its own separate resources to design, make, and sell them. Such decreasing task interdependence reduces the amount of coordination of tasks and supervision required. Those tasks that are not interdependent become the primary building blocks of the organization and so are placed at the top of the hierarchy. Thus an undiversified organization should have a

divisional structure. Hence diversification reduces task interdependence and so requires a shift from a functional to a divisional structure.

Divisionalization increases decentralization, so that the diversification that causes divisionalization also indirectly leads to more decentralization (in addition to that caused by size). Typically operational decisions are decentralized to the divisions, while strategic and major financial decisions remain centralized. A division has a complete set of operating resources and functions to design, make, and sell the product or service, so that the division can act autonomously from the rest of the organization. Therefore, information processing about the product and its environment can be mainly confined within the division. This reduces the need for most of the information about the product to flow to levels above the division, thus relieving the head office of work. In essence, where there are no synergies to be extracted from the operating divisions, then the corporate head office should play a minimal role. This role is confined to work such as supervising the managers in charge of the divisions, resource allocation across divisions, and managing corporate strategy (e.g., acquisitions and divestments). Thus the creation of autonomous divisions constitutes a significant increase in decentralization for the organization. Also, because the division operates independently of the other divisions, its performance can be assessed in terms of its profitability and the divisional manager rewarded on the basis of the profitability of his or her division.

However, the highly decentralized divisional structure only fits high diversification, that is, low task interdependence. In such a case, the products or services of the divisions are unrelated, i.e., they have nothing in common: materials, technologies, distribution or customers, etc. However, many companies are only moderately diversified, i.e., they have related products or services. The less diversified the company, that is, the more related its products or services, the greater their interdependence, i.e., through sharing materials or technologies, etc. This interdependence between divisions requires coordination, so such divisions are less autonomous than in the highly diversified case (just discussed). Consequently, the corporate head office is larger, contains more operating functions, and centralizes more decisions. For example, in a company making a related set of electronics products, some technology is in common across the product divisions, so research on it is conducted in a central laboratory, swelling the number of the staff in the corporate head office (Pitts, 1976). Another example is the vertically integrated forest products company, in which huge volumes of material pass from division to division down the value-added chain. These product flows need coordinating, so that divisional autonomy on production rates is curtailed and the corporate head office contains specialists in production planning and transportation (Lorsch and Allen, 1973). In essence, in related product or service organizations, there are operating synergies to be extracted from the divisions through their coordination and this entails a more "hands on" role for the corporate head office. Also, the managers in charge of the divisions are rewarded for their contribution to corporate profitability, not just the profitability of their division.

The sub-principle of diversification and divisionalization is:

- ◆ As the organization increases its diversification, it should divisionalize and use progressively more decentralization, a smaller head office with fewer operating functions, performance assessment of sub-units by profits rather than costs, and

rewards for divisional managers based more on the performance of their division than of the corporation.

As seen, at low levels of diversification the organization should use a functional structure, whereas at high levels of diversification the organization should use a divisional structure. However at medium diversification there is a choice of either functional or divisional structures. Medium diversification is where there the products or services produced are related to each other in some way, for example having common materials, technology, skills, or customers. If the organization is structured functionally then the resources are managed in an integrated way, such as by a central manufacturing department that fosters economies of scale in purchasing and manufacturing. However, the focus on products or services and their markets is blurred, which impedes innovation and customer responsiveness. Hence a functional structure should be chosen where the medium diversification organization wishes to minimize costs, for example where it faces severe price competition.

Conversely, if the medium diversification organization is structured divisionally, then there is a strong focus by each division on each of its products or services and their markets. This fosters responsiveness to customers. Moreover, because each division has a complete set of functions, interaction among them is facilitated, thus boosting innovation. Responsiveness and innovation, in turn, enhance sales growth. However, the resources are scattered and duplicated across the divisions and not managed in an integrated way, so potential economies of scale in purchasing and manufacturing are sacrificed. Hence a divisional structure should be chosen where the organization wishes to maximize innovation and sales growth. Thus there is a trade-off, so that the medium diversification organization chooses to maximize either cost control or sales growth, while sacrificing the other.

The sub-principle of trade-off for medium diversifiers is:

- ◆ Medium diversified organizations should choose a functional structure where cost control is the main goal, and a divisional structure where sales growth is the main goal.

Some medium diversification organizations may wish to avoid the extremes of maximizing cost control or sales growth and instead may wish to compromise and have some cost control while attaining some innovation and customer responsiveness so as to attain moderate sales growth. They can retain both functional and product or service structures with equal emphasis by adopting a matrix structure of the functional-product, functional-project or functional-service types. Functional managers coordinate the common issues across the related products or services. A subordinate reports simultaneously to a functional manager and also to the manager in charge of a product or service. For example, the functional-project matrix of the Lockheed-Georgia Division of the Lockheed Aircraft Corporation features a manager for each function (e.g., engineering) and also a manager for each project, i.e., airplane type (e.g., C-5A), with subordinates reporting to both. The functional managers seek to control costs by optimizing the use of resources in an integrated way across projects, while the project managers facilitate interaction within their temporary teams (drawn from the functions), to speed innovation and to interface with their client (Corey and Star, 1971).

The sub-principle of compromise for medium diversification is:

- ◆ Medium diversified organizations should choose a functional-product matrix structure where both some cost control and some sales growth is the goal.

Geographical diversification

Geographical diversification is another way to reduce task interdependence. Each locality has its own complete set of resources and functions to design, make, and sell its product or service in its locality, so that it operates independently of other geographical areas of the organization. In this way, diversification along geographical lines can produce autonomous divisions, similar to product or service diversification, only the divisions are defined by locality.

The sub-principle of geographical diversity is:

- ◆ Where each locality operates independently of other localities then the structure should be geographical divisions.

In some organizations geographical diversity is at the medium level, so that there are significant differences between geographies, warranting a separate manager for each, while diversification is also medium, so that there also are significant differences between products, warranting a separate manager for each. Moreover, the activities of the products are distributed across the geographies in such a way that each product manager is coordinating his or her product across the geographies. Thus there will be both several geographical locality managers and several product managers. Each of their subordinates reports simultaneously to the managers of their geography and of their product. Hence the structure is a geography-product, or area-product, matrix (Davis and Lawrence, 1977). A frequently encountered example is the multinational corporation that has more than one distinct product or service, but which also produces and sells each of them in numerous different areas of the world (Galbraith and Kazanjian, 1988).

The sub-principle of medium geographical diversity and medium diversification is:

- ◆ Where there is a medium geographical diversity and medium diversification, then the organization should have a geography-product matrix structure.

CASE ILLUSTRATIONS

To more fully understand how these principles work in practice, we will discuss a positive example and then a negative example.

Product development at Toyota

Product development is sometimes supposed to be synonymous with an organic structure. However, this presumes that the products being developed are highly innovative, based on the creation of new science or technology, so that task uncertainty is high. In

contrast, at Toyota Motor Corporation product development is evolution not revolution. Thus product development involves only moderate levels of task uncertainty, so that mechanistic elements are appropriate as well as organic elements.

Toyota mass produces high-quality, reliable automobiles, yet it is not a leading-edge innovator. As a high-volume automobile company, it faces tough cost pressures due to global competition. Hence new product development at Toyota seeks to create new models that are easily manufactured to tight costs and which share as much as possible across models in the range. This standardization has helped Toyota to introduce new models, and even some new products, thus "competing in time." Thus, while there is some degree of task uncertainty, it is moderate rather than high.

We will now describe product development at Toyota (Sobek, Liker, and Ward, 1998), coding each feature as to whether it is mechanistic or organic. Toyota features strong functions both for manufacturing and product development (mechanistic). Engineers remain in one or other function for most of their careers, so that, while they are rotated, it is within one of these functions (mechanistic), not between functions. There is a lengthy process of in-company training and on-the-job experience over many years before engineers rise to the higher levels where authority is vested (mechanistic). Younger engineers are closely supervised and mentored by their superiors (mechanistic), though the style is Socratic rather than directive (organic). Ongoing cross-functional coordination is provided by meetings (organic), but the extent of these is constrained in number and scope so that engineers can get on with their work.

There is considerable use of written documents (mechanistic). There are detailed, written standards for every part of the automobile (mechanistic). These are frequently updated by the engineers. Being written, they codify the knowledge, so that it is held by the company (mechanistic), not just by the individual. Meetings often work through detailed, written checklists. Requests for changes from one section to another are written and circulated prior to meetings. The decision of the meeting is then written up to record it formally (mechanistic). These documents conform to a standard format (mechanistic). Younger engineers are coached as to how exactly to write these documents and how to conduct the meetings (mechanistic).

There is cross-functional coordination provided by a chief engineer who leads the project and stands outside the functions (organic). However, the engineers working on the project remain in their functions, subject to the authority of their functional boss (mechanistic). Hence the project leader lacks line authority over the project and has to work by persuasion (organic). The credibility of the chief engineer rests in part on his engineering expertise and he is regarded not so much as the project manager as the lead designer (organic). There is a considerable amount of conflict involved, so that issues are thoroughly discussed (organic), rather than being settled forcibly or evaded.

Thus there are both mechanistic as well as organic elements in the organizational structure that is used for product development at Toyota, thereby fitting its strategy.

Product divisions at Nipont

Nipont (a pseudonym for a real Japanese corporation) had a functional structure. However, as it grew and diversified the range of its product offerings, Nipont replaced the functional with a divisional structure, following the pattern of most large corporations

(Rumelt 1974). It hoped that product divisions would offer greater flexibility and speedier response to each different product market, so as to boost innovation and attain faster sales growth. In the booming markets of the time this seemed appropriate. However, shortly after the adoption of the new divisional structure the environment changed in a way that made its divisional structure inappropriate.

International events led to a dramatic rise in the cost of oil, a major raw material, so placing pressure on Nipont's costs. This was compounded by increased competition from international competitors, who "dumped" their product into the Japanese home market at marginal cost, so placing pressure on prices. Squeezed by cost and price pressures, Nipont had to bring their costs under control. Unfortunately Nipont's divisional structure was unsuited to providing tight cost control.

The divisional structure at Nipont consisted of three product divisions: the Chemicals Division, Fibers Division, and Plastics Division. Each division operated autonomously, making its own decisions. However, in strategic terms, while Nipont was a diversified company, it was a company of only medium diversification, because its products were related. There were strong links between its three main products, i.e., substantial task interdependence. Fibers were the main product and were made by the Fibers Division. These are synthetic textiles that use materials made by the company, in common with the second main product, plastics, made by the Plastics Division. Much of the chemicals sold by the Chemicals Division were in fact by-products of the core processes used for the Fibers and Plastics Divisions.

Moreover, many of Nipont's production plants made more than one of these products. Two plants (Mishima and Nagoya) made products for all of the three product divisions. Other plants (Gifu and Shiga) made products for two of the product divisions. Therefore these plants were not under a unified command. The other plants each reported to their product division, so that control was split among the three product divisions. Therefore there was a lack of overall coordination of the company's production plants – despite their operations being interconnected. Thus there was no central control over manufacturing, sacrificing economies of scale. In a buoyant economy this had been a highly acceptable trade-off for the better flexibility and innovation potential offered by organization into separate product divisions. However, it became unacceptable as the environment forced an imperative towards reducing production costs. After a few years, Nipont reverted to a functional structure (Donaldson, 1979).

Given that the environments of organizations are frequently changing, this can lead them to alter their strategies, and they must then quickly change their structures in order to avoid misfit and ineffectiveness.

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