

Deployment of a Divisional Structure in Germany after World War II

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Abstract

In this paper, we consider the deployment of divisional structures using case studies of typical corporations from major industries, and examine the impact and role of US corporations and consulting firms in order to understand German characteristics of management organization structure. We will explore these deployments based on their relationship to the traditional attributes of German business management. Regarding various factors in which Germany differed from the US, circumstances behind decentralization, delegating authority to divisions, correlating general manager compensation to division results, and Germany's traditions of collegiate management and the board-majority system were important. This paper examines the deployment of a divisional structure after World War II through the early 1970s in relation to changes in business strategies, management systems and practices, and managers' traditional attitudes.

Key words : Divisional structure, Functional structure, Diversification strategy, Decentralization, Control systems, Controlling

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I Research Problems

After World War II, the expansion of domestic markets and market opportunities resulting from advances in mass production served as a basis for business diversification that in turn stimulated changes in management organization. Once again, the American-style management system was established as an effective model. A prime example was the decentralized divisional structure implemented first in several pioneering corporations in the 1920s and spreading after the war. German corporations as well sought to restructure organizations along the lines of the US model. However, in Germany there were many factors that influenced on the introduction of American-style divisional structure.

This paper discusses the deployment of a divisional structure in Germany after World War II in relation to changes in business strategies, management systems and practices, and managers' traditional attitudes. We examine the progress of diversification in German corporations and its connection to organizational structure reforms, the overall situations post the deployment of the divisional structure.

We also consider case studies of representative corporations in major industries such as the chemical, electric, and iron and steel industries. We review the deployment of a control system as an internal control organization and the role of US corporations and management consulting firms in management organization reforms. These discussions explain various characteristics of the deployment of German-style divisional structure such as (1) the impact level of delegation of authorities and responsibilities, (2) the traditions and roles of the board of directors and collegiate management, (3) the characteristics of the board majority system, (4) the significance of divisional executive management, and (5) the use of a compensation system linked to divisional profits.

Many studies approach this theme from the perspective of economic and business histories.² However, these studies do not always identify which elements of American and German management methods were combined, how they were hybridized, and which factors determined the hybridization. This paper attempts to explain the details of hybridization and the process of modifying US management methods. It is very important to elucidate how German-style busi-

1 A. D. Chandler Jr., *Strategy and Structure: Chapters in the History of the Industrial Enterprise*, Cambridge, Massachusetts, 1962, A. D. Chandler Jr., *The Visible Hand: Managerial Revolution in American Business*, Cambridge, Massachusetts, 1977, A. D. Chandler Jr., *Scale and Scope: The Dynamics of Industrial Capitalism*, Berkeley, Massachusetts, 1990.

2 See books and articles cited in this paper.

ness management and its particular characteristics, conforming to German and European conditions while still bearing on the German management style, surfaced during the deployment of the American management method from the perspective of structural analysis. We will consider the problems stemming from the German method of conforming to the American method, impacted by traditional and cultural factors in business management as well as institutional factors, and its relationship to the structural characteristics of German capitalism.

The author establishes the idea of “re-framing” as an analytical framework, using which we analyze the various problems in deploying American management methods that created conditions that facilitated business management changes in the postwar era. Re-framing, that is, the framework for analyzing various problems with the deployment of US management methods is explained below. Re-framing in this text refers to business management methods and systems that are defined by structural characteristics of a country’s capitalism and how these are adapted, modified, and made compatible with the structural characteristics of capitalism in a country to which it is transferred. Among these, structural characteristics of this capitalism are related to the state of existence of the following items : a structure of productive forces, industrial structures, and market structures — these three characteristics of German Capitalism are deeply connected to re-framing. In addition, management values, business management traditions, and cultural factors and definability from an institutional perspective are also closely related to re-framing. Business management traditions and culture interrelated with business management standards and values. Decisions on where to place value, that is, production, technology, quality, or marketing policies, which are more directly tied to profit, specifically short-term profit, greatly affect corporate behavior. However, management values and business management culture are not simply matters of general culture, but have deep connections with the structural characteristics of target markets identified by corporations. For example, if the commodity market in a certain country or region prioritizes product quality or functionality, corporations will focus on values and differentiation in technology or production because management values conform to market characteristics. Thus, market characteristics are closely related to management standards and values regarded important by corporations. In addition, institutional factors include legal systems comprising all types of regulations ; labor relations ; educational systems ; and system for specialized skills. A country’s educational system is closely related with the cultivation of executives and managers and that of skilled workers. Thus, the receiving nation’s capitalistic characteristics are amended or modified to an adaptable form when the originating country’s management methods, created for its own capitalistic structural characteristics, are introduced and spread throughout a foreign country using that

country's methods. Accordingly, re-framing is the process of structural adaptation in response to different environmental conditions and a method of structural analysis, whereby the overall structure of business management is foundational.

Below, we will consider the deployment of divisional structures in Germany. First, we review the expansion of diversification in German corporations in Section II. In Section III, we consider organizational structure reforms along with case studies of divisional structure deployment in representative corporations in major industries. In Section IV, we examine the role of US corporations and management consulting firms in management organization reforms. In Section V, we explain various characteristics of German-style divisional structure deployment based on these discussions.

II Transformation of Business Strategy in Germany : Expansion of Diversification

1 Social and Economic Background of Postwar Diversification

We will first look at the expansion of diversification, one of the most important factors in postwar management organization reforms. At the time, diversification in German corporations was regulated by changes in the environment of industry competition. Specifically, changes in demand patterns and the pace of technological advancement caused changes in competition, with innovations in products and marketing method supplanting traditional factors such as pricing and quality. In addition, increased consumer affluence related to technological potential gave birth to many new product and market opportunities that enabled corporations in many industries to experience fast growth and high profits. Major corporations operating in more traditional boundaries with no potential of absolute or relative growth encountered a difficult choice. For example, at the chemical company Hüls, it became apparent that the reductions in revenue and profit at the beginning of the 1960s far exceeded those of IG Farben's three major successor companies, and heightened the necessity for diversification. In addition, many corporations that had quickly accumulated resources rather than reinvesting in mature products or markets, particularly the most successful companies, needed to find growth opportunities outside their own industry. Diversification was an important element in the strategic response to these circumstances. Particularly at the end of the 1960s, competition due to the

³ Vgl. *Hüls Archiv*, I –5–8, Aktennotiz (8. 8. 1962), S.1.

⁴ G. P. Dyas, H. T. Thanheiser, *The Emerging European Enterprise. Strategy and Structure in French and German Industry*, London, 1976, p.132.

opening up of new markets and the lowering of tariffs in EEC countries was an important factor in this re-orientation toward diversification.⁵

However, the characteristics of German corporate ownership, particularly financial and management constraints in family-owned corporations, restricted diversification.⁶ Other factors limiting diversification included the necessity for rebuilding in the post-war years; extremely rapid growth in the automotive, electrical, and capital goods industries; tax laws; and tradition of cartels and trusts linked to relatively weak anti-trust laws.⁷ Technological relevance was a dominant factor of the diversification movement in Germany. However, analysis of the top 100 industrial enterprises reveals that diversification was not the only direction taken after the war, but in fact diversification also occurred simultaneously, or nearly so, with horizontal and vertical integration.⁸

2 Advancement of Diversification and its Characteristics

Next, as we look at strategic changes in the advancement of diversification, 34 out of the top 100 industrial enterprises' business structures in 1950s Germany were single types and 26 were dominant types. In contrast, 32 companies were related types and seven were unrelated types. Although single-type firms decreased to 22 by 1960, the most important change in the 1950s was the diversification that occurred in 12 such corporations. In this diversification, nine of these corporations became dominant types, two related types, and one an unrelated type. As a result, dominant-type firms increased slightly to 28 by 1960. From 1950 to 1960, nine corporations diversified away from being dominant types, with eight of these becoming related types and one an unrelated type. While 40 corporations had become related types by 1960, unrelated types slightly increased to nine, a minor change.

In contrast, in 1960 and 1970, the greatest changes were in diversification to related types (5) and unrelated types (10). In 1970, 56% of corporations had significantly diversified in this manner. Although related types had decreased slightly to 38, unrelated types had greatly increased to 18.

Further, as we examine changes in the 20-year period between 1950 and 1970, the channel diversification often adopted was from single type to dominant type to related type to unrelated type. It was rare for a company to stray from this channel and move from a single type

5 U. Wengenroth, *Germany: Competition abroad—Cooperation at home, 1870–1990*, A. D. Chandler, Jr., F. Amatori, T. Hikino (eds.), *Big Business and the Wealth of Nations*, Cambridge University Press, 1997, p.162.

6 G. P. Dyas, H. T. Thanheiser, *op. cit.*, p.133.

7 *Ibid.*, p.100.

8 *Ibid.*, p.90, p.101.

to a highly diversified related type or unrelated type. That is, 35% (nine out of 26) of the corporations that were dominant types in 1950 had changed over 10 years, and 25% (seven out of 28) of the corporations that were dominant types changed by 1970.⁹

Thus, we see that in Germany, the striking expansion of diversification to unrelated types, such as that among US conglomerates, had not occurred in the 1960s, as Germany emphasized diversification in related types.

III Deployment of Divisional Structure in Major German Industries

1 Overall Circumstances of the Deployment of Divisional Structure

(1) Expansion of Diversification and Changes in Organization Structure

We will next look at the changes in organizational structure and their relationship to the expansion of strategy. In comparing the number of top 100 industrial enterprises using a functional structure in the years 1950, 1960, and 1970, 36 companies used a functional structure, which then decreased to 21 and finally to 20. In 1950, 15 companies had a holding company structure, which fell to 14 and then to 12. Companies with a mixture of functional and holding company structures increased from 43 to 48, and then fell dramatically to 18. In contrast, companies with a divisional structure numbered a mere five in 1950, tripled to 15 in 1960, and greatly increased to 50 by 1970. Observing the 78 German capital firms, companies with a divisional structure were unheard of in 1950 and by 1960 there were still only three; however, by 1970, they accounted for 40% of the total. Nevertheless, when compared to the 78% and 72% adoption rates of the US and UK, respectively, Germany's rate was still low.

In 1950 and 1960, 25 of the top 100 companies implemented organizational structure reforms, out of which the most common change was a shift from a functional structure to a combination of functional and holding company structures (12 companies), while a change to a divisional structure was largely unseen. Deployment of divisional structures progressed strongly in the 1960s, and between 1960 and 1970, 36 out of 47 companies chose to adopt this type of organization. In the 20 years between 1950 and 1970, the most common pattern was a change from a functional structure to a combination of functional structure and holding company, and then to a divisional structure. Of the 45 companies that adopted a divisional structure, only four moved from a functional structure and six from a holding company structure. In contrast, 35 companies changed from a functional structure/holding company combina-

⁹ *Ibid.*, p.26, pp.63-72. For an index on types and classifications of diversification, refer to R. P. Rumelt, *Strategy, Structure and Economic Performance*, Boston, 1974, Chapter 1

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tion to a divisional structure.

Regarding such changes, E. Gabele has noted that among the overall changes to management structure, change processes resulting in divisional structures were overwhelmingly common. However, there was a great difference in adoption between large firms and small- and medium-sized firms. For example, at the end of 1974, although 46.7% of large corporations had implemented a divisional structure, among medium-sized firms, the implementation rate was only 38%.¹¹ In 1982, A. Harrmann pointed out that during the prior decade, many corporations had restructured, with one of the characteristics of this change being apparent in operational field-, division-, and product-oriented organizations. However, when viewed overall with small- and medium-sized firms, many corporations did not replace their functional structures with divisional structures. Among the large companies that primarily moved to a divisional department or divisional structure during the late 1960s and early 1970s, some had product divisions and regional divisions, among which overseas and European division regions were problematic.¹²

Next, as we look at the relationship between strategy and organizational structure, in 1950, only 7% of the top 100 industrial enterprises that had implemented diversification (both related and unrelated) were also using a divisional structure. This proportion had reached 20% by 1960 and 67% by 1970. Of the 78 West German capital firms, a mere 8% had this structure in 1960 which increased up to 63% by 1970.¹³ However, when compared with the 500 largest US companies, not only was there a difference in the adoption rate of divisional structures, but there also was a time lag in implementing diversification and divisional structures. Among the 45 corporations that had shifted to this organization form between 1950 and 1970, 14 had made the change within 10 years, seven between 10 and 20 years, and nine took more than 20 years to change. In addition, 60% of corporations that had expanded to include greater varieties in products and markets during the 1950s had adopted a divisional structure during that 10-year period. Although this figure rose to 75% by the 1960s, the most remarkable wave of divisional structure deployment was witnessed in the late 1960s.¹⁴ In 1967, the domain of corporate organization was regarded as a new frontier,¹⁵ and deployment of divisional structures

10 G. P. Dyas, H. T. Thanheiser, *op. cit.*, pp.65–73.

11 E. Gabele, *Die Einführung von Geschäftsbereichsorganisation*, Tübingen, 1981, S.1–2.

12 A. Harrmann, Steigert ein Wechsel der Strukturorganisation die Unternehmenseffektivität?, *REFA-Nachrichten*, 35. Jg, Heft 4, August 1982, S.202–3.

13 G. P. Dyas, H. T. Thanheiser, *op. cit.*, p.66.

14 *Ibid.*, p.73–4.

15 Wo liegen noch Rationalisierungsmöglichkeiten im Betrieb?, *REFA-Nachrichten*, 20. Jg, Heft 6, Dezember 1967, S.263.

in more than half of the 100 largest corporations occurred after that year.¹⁶ On this point, H. Siegrist noted that divisional structures first began to truly penetrate German corporations in the late 1960s, approximately 10 years after overall penetration in the US.¹⁷

(2) Generational Change in Management and Deployment of Divisional Structures

Divisional structure deployment in German corporations was significantly affected by management systems and practices as well as managers' traditional attitudes. Compared with a country such as the US, where management had evolved, business management specialization in German corporations was stagnant, and there was a strong differentiation between daily operational and top executives, who were highly autonomous.¹⁸ The ideological foundation of top management authority that had become entrenched as a traditionally strict gap kept between executives at the board of directors level and the lower, laborer level was diametrically opposed to broader delegation of responsibility and strategic information sharing between vertical strata required by a divisional structure. In such cases, adoption of a new form of organization typically depended on one person or alternatively a group of a few people. The departure of certain individuals from the ranks of top management and handoffs to successors became decisive points in the timing of organizational change.¹⁹

The fact that organizational restructuring occurred after the beginning of the 1960s generally resulted from opposition by one or two key individuals in the power structure of a given corporation rather than a lack of either top management knowledge regarding divisional structures or confidence in its appropriateness for solving problems in their organization. Therefore, a change in corporate control resulting from a generational change in management was an important method of eliminating obstacles to organizational restructuring.²⁰ As V. Berghahn noted, the generational change in management began slowly at the beginning of the 1960s, and shifts from a functional structure to a divisional structure occurred relatively slowly as a result of dependence upon these generational changes in corporations.²¹²²

16 G. P. Dyas, H. T. Thanheiser, *op. cit.*, p.129.

17 H. Siegrist, Deutscher Großunternehmen vom späten 19. Jahrhundert bis zur Weimarer Republik, *Geschichte und Gesellschaft*, 6. Jg, Heft 1, 1980, S.88.

18 Vgl. H. Hartmann, *Der deutsche Unternehmer: Autorität und Organisation*, Frankfurt am Main, 1968, S.47, S.75, S.78, S.91, S.281, S.291.

19 G. P. Dyas, H. T. Thanheiser, *op. cit.*, p.136.

20 *Ibid.*, p.114.

21 V. Berghahn, *Unternehmer und Politik in der Bundesrepublik*, Frankfurt am Main, 1985, S.293.

22 S. Hilger, „Amerikanisierng“ deutscher Unternehmen. *Wettbewerbsstrategien und Unternehmenspolitik bei Henkel, Siemens und Daimler-Benz (1945/49–1975)*, Stuttgart, 2004, S.278.

2 Case Studies of the Deployment of Divisional Structures

Based on the previous overview of the deployment of divisional structures, we will next consider case studies of typical corporations in major industries.

(1) Deployment of Divisional Structures in the Chemical Industry and its Characteristics

①Henkel Case Study

Let us first look at the chemical industry, an archetype of the expansion of diversification and deployment of divisional structures.

Henkel was a typical corporation that implemented organizational reforms based on a proposal from the Stanford Research Institute (SRI), a US consulting firm. SRI made three proposals regarding long-term business planning, strategic business planning, and organizational structure.²³ The proposal for organizational restructuring made in December 1968 was approved in 1969,²⁴ and on this basis, a new organizational structure was deployed. At Persil/Henkel, where diversification was in progress to a certain extent, top management had extraordinary difficulty in operating the company at peak efficiency with middle and lower levels of management organized according to function.²⁵ In SRI's proposal, Persil/Henkel had arrived at the point where they needed to make fundamental changes to their organizational structure due to corporate scale and diversity.²⁶ In Henkel's existing functional structure, specific obstacles had become apparent, including the delegation of profit responsibility, manufacturing methods to reduce overall corporate costs, optimization of costs for marketing and other functions, and inadequate information exchange among various functional silos during operational planning. A lack of clarity on responsibilities and authority in addition to a lack of delegation of authority at all levels of the company caused major problems. Therefore, top management was forced to deal with issues in excessive detail, which resulted in problems because insufficient time remained for basic corporate policy decision-making and planning.²⁷

It was decided that increasing profits and decreasing costs required cost centers and profit

23 Vgl. *Henkel Archiv*, 251/1, Stanford Research Institute (SRI), Einführung einer verbindlichen langfristigen Planung in die Persil/Henkel Gruppe — Phase I, April 1967, *Henkel Archiv*, 251/2, SRI, Langfristigen Planung für Persil/Henkel, Phase II : Strategische Planung, 1. Bd, 2.Bd, Juli 1968, *Henkel Archiv*, 314/133, SRI, Langfristigen Planung für Persil/Henkel, Phase III : Organisationsstruktur der Unternehmensspitze und des leitenden Management, Dezember 1968.

24 Henkel GmbH, *Geschäftsbericht 1969*, S.33.

25 *Henkel Archiv*, 251/2, Stanford Research Institute, Langfristigen Planung für Persil/Henkel, Phase II, S.315.

26 *Henkel Archiv*, 314/133, Stanford Research Institute, Langfristigen Planung für Persil/Henkel, Phase III, S.3, S.24.

27 *Ebenda*, S.24–6, S.28–30, *Henkel Archiv*, 314/96, SRI-Besprechung am 16. Oktober 1968 (17. 10. 1968), S.3, *Henkel Archiv*, 251/10, SRI. Mündliche Präsentation. Struktur der Unternehmensorganisation von Persil/Henkel.

centers in lower groups with authority and responsibility delegated to them.²⁸ Thus, responsibilities for specific markets were delegated to each division, and organizational restructuring was conducted with the concept that various activities such as product development, production, and marketing in any given market orientation should be consolidated into divisions.²⁹ The restructuring resulted in 1) six product divisions, 2) regional departments, 3) eight functional departments, and 4) an executive committee that acted as the representative executive organ of the board of directors.

The organization comprised six divisions : 1) detergent and cleaners, 2) packaging materials, 3) organic chemical products, 4) home care pharmacology, 5) toiletries, and 6) inorganic chemical products and adhesive substances. Operational management in each division was responsible for the authority the executive committee delegated to them, and for operations as defined by a framework of policies. Each division was in charge of the various operational functions necessary for the efficient execution of divisional business activities and operational function such as production, marketing, development of new products through product release, and exportation. Responsibility for all necessary operations in the division rested with a general manager, and each division was organized as an independent profit center.

As we look at regional departments, the SRI proposals included the establishment of two departments : one for Europe and the other for non-European regions. However, in actuality, only the department responsible for non-European regions was set up. In addition, functional departments were created with the primary responsibilities of 1) advising and supporting divisions, other operational departments, and regional departments ; 2) providing aid and information to executive committees for various functional areas and issues ; and 3) establishing policies, standards, and processing methods for the company overall, providing major service functions, and estimation of each functional activity. Functional departments were set up for 1) business planning, 2) finance and accounting, 3) legal affairs, 4) logistics, 5) organizations and scientific management, 6) production and engineering, 7) R&D, and 8) human resources and social affairs. These were all cost centers.

Among top management organization reforms, Henkel GmbH became the executive body acting as general office managing all domestic and foreign operations. This office supervised Henkel & Cie GmbH and Henkel International GmbH, which were responsible for European operations and non-European regions, respectively. By creating a headquarters' organization as

28 *Henkel Archiv*, 251/2, Stanford Research Institute, Langfristigen Planung für Persil/Henkel, Phase II, 2. Bd, S.440.

29 Interview der Z für O zur Reorganisation der Henkel-Gruppe, *Zeitschrift für Organisation*, 39. Jg, Nr.5, Mai 1970, S.199.

well as divisions, the executive team, comprising the headquarters' board of directors, was freed from individual operational problems of each division, and dedicated its time and energy to activities such as general issues in operational management of each division as well as planning, management, and control. Furthermore, these executives established five corporate-wide staff departments to support their activities: 1) management support, 2) European industry, 3) international public relations, 4) audits, and 5) secretarial.³⁰

By 1967, SRI had conveyed the principle of return on investment (ROI), an important concept for management in a divisional structure requiring a self-support account system.³¹ This acted as an efficient system foundation for profit planning and budgetary control.

② Bayer Case Study

Our next subject, Bayer, had no need to move away from a functional structure until the beginning of the 1960s. However, as with Henkel, corporate growth and competition set corporate management on a new path.³² It was proposed that everyday operational management be relegated to lower level managers to lighten the operational burden of directors, and it was decided that these operations would be conducted by divisions. The separation of production and sales organizations ended, and the consolidation of production and sales created “partial companies” that were defined in the same terms as US-style divisions.³³

The deployment of a divisional structure in Bayer began with the restructuring in February 1970,³⁴ and the new organization was implemented on January 1, 1971.³⁵ The new organization

30 Vgl. *Henkel Archiv*, 314/133, Stanford Research Institute, Langfristigen Planung für Persil/Henkel, Phase III, S.1–114, *Henkel Archiv*, 314/96, Niederschrift über eine außerordentliche gemeinsame Postbesprechung am 20. Februar 1969 (20. 2. 1969), *Henkel Archiv*, 251/10, Einrichtung von Sparten und Funktionen (31. 10. 1968), *Henkel Archiv*, 25/10, Faktoren, die für eine produktionorientierte Organisationsstruktur sprechen (11. 7. 1968), *Henkel Archiv*, 153/42, Niederschrift über die gemeinsame Post PERSIL/HNKEL/BÖHME/HI vom 12. 11. 1968 (14. 11. 1968), *Henkel Archiv*, 251/10, Neuorganisation. Unterlage für Gemeinsame Post am 12. 11. 1968 (9. 11. 1968), *Henkel Archiv*, 251/10, Oranisationder Unternehmensspitze (30. 5. 1968), *Henkel Archiv*, 153/42, Präsentation einer Organisationsstruktur für das Management Persil/Henkel durch das Stanford Research Institut (SRI), *Henkel Archiv*, 314/96, Zentral-Geschäftsführung Henkel GmbH, *Henkel Archiv*, 314/96, Die Unternehmensorganisation nach Sparten (18. 7. 1968), *Henkel Archiv*, 314/96, Neuordnung (10. 3. 1969), *Henkel Archiv*, 314/96, Neuordnung. Organisationsvorschlag für Funktionen — Produktion/Ingenieurwesen —. Besprechung am 12. Februar 1969 (13. 2. 1969), *Henkel Archiv*, 251/9, Kurz-Referat. Gewinn- und Kostenverantwortung der Sparten/Funktionen (6. 5. 1969), *Henkel Archiv*, 251/9, Kostenverantwortung der Funktionen, insbesondere der Funktion Finanzen/Rechnungswesen. Notiz Mr. Cavender vom 17. 4. 1969 (23. 4. 1969), Henkel GmbH, *Geschäftsbericht 1968*, W. Feldenkirchen, S. Hilger, *Menschen und Marken. 125 Jahre Henkel 1876–2001*, Düsseldorf, 2001, S.200–2, Die organisatorische Neuordnung der Henkel-Gruppe “Sparten, Funktionen und Regionen”. *Zeitschrift für Organisation*, 39. Jg, Nr.5, Mai 1970, S.196–8.

31 S. Hilger, *a.a.O.*, S.233.

32 C. Kleinschmidt, *Der produktive Blick. Wahrnehmung amerikanischer und japanischer Management- und Produktionsmethoden durch deutsche Unternehmer 1950–1985*, Berlin, 2002, S.266–8.

33 *Bayer Archiv*, 001–004–003, Vorschlag für einen Organisationsplan der FFB (ohne Agfa), S.1–2, S.4.

34 *Bayer Archiv*, 001–004–002, Die Schrift von Kurt Hansen an die Leitenden Angestellter der Werke



36
 featured three primary elements : divisions, a central staff department, and staff for the board of directors. Bayer created a thorough division of labor and delegation of authority, thereby allowing managers to concentrate better on managerial activities.³⁷ The general objective of the new organization conceived by Bayer's W. Knauff was to take measures in tackling the changes caused by rapid growth, technological development, and market expansion, which would place Bayer in a position where the growing number of operations in the future could be effectively managed. In this aim, maximizing flexibility and efficiency became an objective. In addition to the formation of sales-oriented divisions, Bayer clearly delineated administrative boundaries ; delegated authority and responsibilities ; architected an efficient information system appropriately for the new organizational structure ; developed a corporate group-wide integrated planning system ; and clearly divided functions within lines, staff, and committees.

Bayer was divided into nine product divisions : 1) inorganic chemical products, 2) organic chemical products, 3) rubber, 4) plastics and lacquer, 5) polyurethane, 6) dyes, 7) textiles, 8) pharmaceuticals, and 9) plant protection chemicals. These divisions were managed on the basis of policies established by the board of directors from which general managers would seek approval for their division plans at the appointed time each year. They then bore the responsibility delegated by the board of directors to achieve divisional goals on the basis of those plans. The division into nine product divisions was deemed important to give appropriate operational scale to the divisions. Each division had an integrated set of functions : production, sales, applications engineering, and research. Division management was in general delegated by the board of directors to two people : an individual responsible for commercial affairs and the other responsible for technological affairs. Each was a director with equal authority.

Manufacturing plants and their related auxiliary plants (such as drying plants) were integrated on a division production basis appropriately for their locations. As long as the various departments within each division were not consolidated into service departments that worked across divisions (such as central staff departments), a particular division's sales oversight included all other departments or groups necessary for the success of the respective division's

↘ Leverkusen, Dormagen, Elberfeld und Uerdingen sowie der deutschen Aueßstellen (25. 2. 1970), S.1, *Bayer Archiv*, 001-004-002, Neuorganisation der Farbenfabriken Bayer AG — (3. 2. 1970), *Bayer Archiv*, 010-004-005, Neuorganisation der Bayer AG, S.1, *Bayer Archiv*, 010-004-005, Die Schrift von Kurt Hansen an die Leitenden Angestellten der Werke Leverkusen, Dormagen, Elberfeld und Uerdingen (2. 9. 1965), *Bayer Archiv*, 001-004-003, Neuorganisation.

35 *Bayer Archiv*, 001-004-002, Vorstands Rundschreiben Nr.63 (14. 10. 1970), S.1.

36 *Bayer Archiv*, 010-004-005, Neuorganisation der Bayer AG, S.2.

37 Vgl. *Bayer Archiv*, 210-001, Führungsgrundsätze der Bayer AG, S.4.

marketing such as market development, customer support, market research, and order processing. In addition, research operations were integrated into divisional research departments, with research groups working in divisional research departments and researchers outside the central scientific research laboratories consolidated into the division's research department. Placing technology departments into divisions, Bayer intended to stimulate close contact between sales, development, research, and production. Regarding divisional staff departments, division offices were composed of staff units, and had technical and commercial staff managed by one person. These staff organizations acted as planning, direction, and control organizations and would provide services within the division's purview.

Among the top management organizational changes, the board of directors had corporate-wide operational management responsibility and was in charge of divisional and central staff department operation management; corporate policy; making corporate-wide or semi-corporate-wide objectives; decision-making for investments or other basic organizational issues; decision-making and approval for opening up negotiations on stock acquisition and sale; and important personnel issues such as manager selection and support for appointment, advancement, and transfer. Even among directors, a division of labor was implemented for production, sales, corporate group adjustment, research, engineering, finance and accounting, legal and tax affairs, and human resources and social issues. In addition, a staff for the board of directors was created to aid directors in their work. This staff organization served several purposes: prioritizing activities and avoiding information loss; jointly conducting staff functions between those responsible for commercial and technical areas as a means of planning, direction, and control for the board of directors to provide corporate-wide management; and establishing and allocating staff functions appropriate for new organizations. Furthermore, central staff departments were established. Their functions were services provided to divisions as well as the company as a whole, and oversight for each of them was given to one individual reporting to the board of directors. These staff departments were 1) human resources and social issues, 2) engineering, 3) finance and accounting, 4) purchasing, 5) advertising, 6) legal and tax affairs, 7) central research, 8) patents and licensing, and 9) applications engineering. These central staff departments, along with the board of directors' staff, served as connecting points for all nine divisions, both domestic and international, of the corporation. Specialized management for each central staff department was undertaken by directors representing specialized fields. Moreover, extra-divisional committees and council organizations were established for effective information exchange. In 1972, 10 committees and council organizations were formed: 1) general manager council, 2) investment council, 3) plant manager council, 4)

central personnel committee, 5) central production committee, 6) central sales committee, 7) central research committee, 8) central engineering committee, 9) central technical committee, and 10) central corporate group coordination committee.³⁸

Overall, the new organization helped increase the company's competitiveness in global markets. Moreover, the organization had the objectives of improving the workforce's awareness of revenues and costs, delegating authority and personnel management, and strengthening market consciousness across the corporation.³⁹

③BASF Case Study

Furthermore, BASF was busy restructuring their organization from the late 1960s to the early 1970s and instituted a new organization in June of 1970.⁴⁰ After the war, BASF adopted a functional structure covering production, sales, research, engineering, finance, human resource and social issues, and legal affairs.⁴¹ In addition, by the early 1960s, manufacturing department was divided into four sections by product line.⁴² However, the scope and growth rate of the chemical industry rendered review of a functional structure's functional domain impossible. At BASF, just as at Bayer, Hoechst, and Siemens, splitting up the company into relatively independent divisions for greater overall visibility and delegating responsibilities to divisions for the production and sales of specific product lines was the only method to restore visibility.⁴³ Not only did BASF's revenues more than double between 1960 and 1970, but with additional

38 *Bayer Archiv*, 001-004-002, Neuorganisation der Farbenfabriken Bayer AG (3. 2. 1970), *Bayer Archiv*, 001-004-002, Organizational Rearrangement of Farbenfabriken Bayer AG — Objectives, Functions and Tasks —, *Bayer Archiv*, 001-004-002, Organisationplan der Farbenfabriken Bayer AG, Leverkusen, Stand: 1. 4. 1971, *Bayer Archiv*, 001-004-001, Farbenfabriken Bayer A. G., Leverkusen-Bayerwerk. Organisationspläne der Verkaufsabteilungen, *Bayer Archiv*, 001-004-002, Vorstands Rundschreiben Nr.64 (22. 10. 1970), *Bayer Archiv*, 001-004-003, Die Schrift von Kurt Hansen an W. Knauff über den Vorschlag des Organisationsplanes von Knauff (24. 2. 1964), S.3-4, S.8, *Bayer Archiv*, 010-004-005, Organisatorische Gliederung der Bayer AG, Stand: 1. 7. 1972, *Bayer Archiv*, 010-004-005, Neuorganisation der Bayer AG, *Bayer Archiv*, 001-004-002, Die Schrift von Kurt Hansen an die Leitenden Angestellten der Werke Leverkusen, Dormagen, Elberfeld und Uerdingen sowie der deutschen Aueßstellen (25. 2. 1970), S.2-3.

39 C. Kleinschmidt, *a.a.O.*, S.269.

40 *BASF Archiv*, C 0, Organisatorische und personelleänderungen bei AOA (5. 6. 1970), S.1, E. Koch, Offene Tore für das schöpferische Potential. Neuorganisation der BASF — Die WELT sprach mit Vorstandsvorsitzen dem Bernhard Timm, *Die Welt*, Nr.193, 21. 8. 1970.

41 *BASF Archiv*, C 0, Die Neuorganisation der BASF unter Marketingssichtspunkten, S.2, *BASF Archiv*, C 19/14, C 0, Organisatorische Maßnahmen (19. 12. 1961), *BASF Archiv*, C 19/14, Organisatorische Maßnahmen (21. 12. 1961), *BASF Archiv*, C 19/13, Organisation im Verkauf (24. 6. 1960).

42 *BASF Archiv*, C 0, Organisation der BASF (1. 1. 1964), *BASF Archiv*, C 19/14, Werksinterner Verteiler (25. 1. 1962), *BASF Archiv*, C 19/15, Rundschreiben an alle Abteilungen des Werkes (20. 12. 1963), *BASF Archiv*, C 19/15, Die Schrift an alle Vertrauensleute (22. 7. 1963). For information on organization changes at this level, refer to W. Abels Hauser, Die BASF seit der Neugründung von 1952, W. Abels Hauser (Hrsg.), *Die BASF: Eine Unternehmensgeschichte*, München, 2002, S.571-3

43 *BASF Archiv*, C 0, Die Neuorganisation der BASF unter Marketingssichtspunkten, S.2.

progress achieved through business expansion and external acquisitions, other group companies' revenues also increased by more than 20 times during the same period. In addition, with forward and backward integration into the oil and gas areas, the dramatic growth of the company and expansion of industry scope and business lines, it became impossible to maintain the company's existing organization management. The first crisis in terms of profit and finance emerged in mid-1967, forcing the company to acknowledge the necessity of organizational restructuring.⁴⁴

The organizational restructuring aimed to resolve these issues by transferring management functions from the board of directors to operational divisions. The role of a division's general manager was to implement and realize optimal production and sales strategies that could achieve planned revenue goals. The general manager was entrusted with domains worth between 100 million and 600 million Deutsche Marks, and great value was placed on having them act as actual managers. Therefore, broad commerce and technical responsibilities were transferred into each division.⁴⁵ There were four product divisions at the operational activity level: 1) basic chemicals, oil, gas, and agricultural chemical products; 2) plastics and textiles; 3) dyes, chemicals, and pharmaceuticals; and 4) consumer products and sales coordination. The duties of these product divisions, in addition to the domains of production and sales, included planning, development, and applications engineering functions, and acted as profit centers with responsibility for revenues and profits.⁴⁶ BASF's own internal documents regarding this organizational restructuring focused on particularly one large issue the organization experienced until that time with operational departments in that, although the operational departments were responsible for costs, they were not responsible for profits.⁴⁷ Thus, a divisional general manager was given a division that was formed as a profit center under the direction of the board of directors with that issue in mind, and each division was consolidated according to their group under the purview of an executive director.⁴⁸ The board of directors comprised nine members, seven of whom acted as divisional general managers.⁴⁹ In addition, the divisions took responsibility for executing long-term strategies for not only operational

44 K. Selinger, Die Organisation der BASF-Gruppe, *Zeitschrift für Organisation*, 46. Jg. Heft 1, 1977, S.17, W. Abelshäuser, a.a.O., S.570, S.574.

45 E. Koch, Offene Tore für das schöpferische Potential, *Die Welt*, Nr.193, 1970.

46 *BASF Archiv*, C 0, Neuorganisation der BASF-Gruppe (in: *BASF Information*, Sonderausgabe, Oktober 1969).

47 *BASF Archiv*, C 0, Die Neuorganisation der BASF unter Marketingssichtspunkten, S.3-4.

48 *BASF Archiv*, C 0, Bemerkungen von Professor Dr. Timm über die Neuorganisation der BASF (29. 8. 1973), S.6.

49 *BASF Archiv*, C 0, The Badische Anilin- und Soda-Fabrik AG (BASF), Some Information Worth Knowing, p.5. For more information on personnel changes in primary BASF departments and positions, refer to *BASF Archiv*, C 0, Organisation der BASF (Stand: Juli 1975).

planning but also other areas of activity. Inter-divisional connections in production and sales were secured with planning systems, transfer pricing, and a common sales network.⁵⁰

The internal structures of divisions such as basic chemicals, oil and gas, and agricultural products were organized into narrower categories according to products such as basic chemical products, oil and gas, chemical fertilizers, and plant protection chemicals. Each unit had a staff organization and a support system for operational activities. The consumer products and sales coordination division had three departments : 1) dyes and paints, 2) magnetic technology and printing plates, and 3) sales coordination. In contrast to the former two, which were product departments, the sales coordination department was responsible for marketing methods, organization, sales staff coordination, publicity, and European branches (including customer coordination).⁵¹

In addition, regional departments responsible for non-European regions were established in response to the increasing importance of overseas operations. Regional departments comprised four regional sections : 1) North America, 2) Central and South America, 3) Africa and West Asia, and 4) South Asia, Southeast Asia, and Australia. Each had its own staff organization.⁵² Product divisions were responsible for products primarily limited to Europe, whereas the four regional departments were responsible for all products in their region. BASF's international activities were always overseen by legally independent companies ; hence, the main function of regional departments was the coordination of these companies' revenue goals. Regional departments, such as product divisions, were evaluated on their results.⁵³ In that respect, regional departments acted as regional divisions in areas outside of Europe, and product divisions focused on Europe as well as regional departments responsible for non-European areas had integral management organizations.

At the top management level, directors had responsibility for management of corporate group strategy along with direct responsibility for parts of new organizational subsets. A new staff group called the "headquarters planning department" supported the board of directors' activities. Modern technologies such as management information systems (MIS) were used for selecting and processing of information. In Addition, their use made possible management activities informed by data-based planning and the clear delegation of authority within large work domains at appropriate management levels.⁵⁴ This headquarters planning department had

50 K. Selinger, *a.a.O.*, S.17.

51 *BASF Archiv*, C 0, Neuorganisation der BASF-Gruppe (Juni 1970).

52 *Ebenda*, S.12-3, *BASF Archiv*, C 0, Neuorganisation der BASF-Gruppe (in : *BASF Information*, Sonderausgabe, Oktober 1969).

53 K. Selinger, *a.a.O.*, S.19.

54 *BASF Archiv*, C 0, Direktionssitzung am 17. 10. 1969 zum Thema "Neugestaltung der Organisation der

five sections : 1) investment appraisal, 2) national economy, 3) planning systems, 4) strategic planning and investment, and 5) annual planning and budgeting. Planning function work was divided, with a unit responsible for market analysis being placed in the national economy.⁵⁵ In these planning departments, the production, sales, and investment plans created by the various departments of each division were scrutinized and elaborated upon, with alternative plans also created. Through this process, many more corporate strategy and investment plans were submitted to directors, who would then be better able to select a plan more likely to be optimal.⁵⁶ The development of such headquarters mechanisms enabled by these planning departments was a response to the need for delegation of operational authority as well as to the growing need to connecting functions in the centralized elements that followed decentralization.⁵⁷ At the headquarters level, functional staff departments were created to provide corporate group services. These four departments were 1) research, 2) legal and tax affairs, 3) finance, and 4) human resources and social issues.⁵⁸

These new forms of organization were developed with the cooperation of the influential US management consulting firm, McKinsey.⁵⁹ As we will describe later, this US consulting firm had a large impact on subsequent organizational restructuring in BASF.

④Glanzstoff Case Study

Furthermore, the developments noted in the aforementioned three companies were observed at Glanzstoff from the late 1960s through the early 1970s, when Glanzstoff also deployed a product divisional structure. When we examine the feinchemical division, for example, two integral principles were applied. One was a concept of divisions organized vertically by product domain, integrating all activities in Glanzstoff as well as AKU and other affiliated companies. The other principle sought international business structures for chemical products that include sulfur and feinchemicals. This division managed organic and inorganic sulfide products except intermediate products resulting from Viscose production, agricultural chemical products, feinchemical and products related to these three areas. R&D and production of these products

↘ BASF-Gruppe", S.1-3.

55 *BASF Archiv*, C 0, Dem Vorstandsvorsitzenden direkt unterstellte Einheiten, S. A, S.2 A, *BASF Archiv*, C 0, Organisation der BASF-Gruppe (Dezember 1972), S.3, *BASF Archiv*, C 0, Neuorganisation der BASF-Gruppe (Juni 1970), S.3.

56 E. Koch, Offene Tore für das schöpferische Potential, *Die Welt*, Nr.193, 1970.

57 *BASF Archiv*, C 0, Neuorganisation der BASF-Gruppe (in : *BASF Information*, Sonderausgabe, Oktober 1969).

58 *BASF Archiv*, C 0, Die Schrift an die Mitarbeiter (2. 2. 1970), Neuorganisation der BASF-Gruppe, (in : *BASF Information*, Sonderausgabe, Oktober 1969).

59 *BASF Archiv*, C 0, Direktionssitzung am 17. 10. 1969 zum Thema "Neugestaltung der Organisation der BASF-Gruppe", S.2-3.

in various EEC countries as well as all sales and marketing activities globally were consolidated in this division. Engineering and other various activities in the other operational domains of AKU and Glanzstoff's central department were coordinated by divisions.

Each division was placed under a general manager, who was responsible for its operational results in addition to coordination of all divisional functions such as production, sales, and revenue as well as further expansion of the division. General managers held authority over all departments and specialized bureaus in AKU and Glanzstoff in order to perform their role and obtained various reports, statistics, and other materials critical to their divisions. Moreover, each division had a deputy general manager who acted as a proxy in the general manager's absence or when problems arose. Divisional activities were monitored by a governing body comprising three members from AKU and Glanzstoff's executive team.

For division investments, the general manager annually submitted the following year's investment plan to the governing body. Authority for a discretionary amount of money was granted in an investment plan framework approved by the governing body that reviewed each investment application. The amount varied by position. A divisional general manager's discretionary range was between 20,000 and 100,000 Deutsche Marks, and anything above that amount required the governing body's approval. Investment limits within the discretionary amount were set at a maximum of 20,000 Deutsche Marks for production or sales divisional operations managers, and a maximum of 10,000 Deutsche Marks for anyone lower in the division.⁶⁰

Similarly, all AKU and Glanzstoff wool domain activities were integrated in a vertically organized wool division that was a business unit organized as an independent division. The function of the division, responsibility and authority of its general manager, and discretionary investment amount were nearly identical to those of the feinchemical division.⁶¹

⑤Hoechst Case Study

Hoechst's organizational restructuring of 1952 divided all the company's domestic and foreign plants and subsidiary companies into five divisions: 1) inorganic chemical products, nitrogen fertilizer, and plant protection chemicals, 2) dyes and other materials and textile auxiliaries, 3) plastics and solvents, 4) pharmaceuticals, and 5) textiles and film. That structure would later be further reorganized into seven divisions. Each division was placed under a di-

60 *Rheinisch-Westfälisches Archiv zu Köln*, Abt 195, F 7-4, Vorschlag über die Bildung einer gemeinsamen AKU-Glanzstoff Schwefelchemie-Division unter der Bezeichnung Feinchemikalien-Division (FCD) (1. 10. 1968).

61 *Rheinisch-Westfälisches Archiv zu Köln*, Abt 195, F 7-5, Vorschlag über den Aufbau einer gemeinsamen AKU/Glanzstoff Vliesstoff Division unter der Bezeichnung Colbond Division (1. 12. 1968).

rector responsible for technology. Coordinating departments were established for finance and accounting ; legal affairs, patents, and tax affairs ; sales ; research ; engineering ; plant management ; and technology (which was later eliminated). In addition, a technical management department and commercial management department were established. In this manner, Hoechst undertook broad management decentralization, though one domain was always simultaneously connected to a division and a coordinating department. Because of this structure, all important decisions needed the approval of at least two directors, which was a joint responsibility.⁶² Under the directors, work group committees were formed with rather broad decision-making authority, which for example could comprise administrative directors and important engineers in plant. In this structure, Hoechst followed IG Farben AG's model.⁶³

However, with the increase in global revenues, greater number of manufacturing facilities, continually expanding operations, and additional domains that came with Hoechst's rapid growth during the 1960s, management could no longer be contained by the existing organizational framework. As a result, Hoechst decided that an organizational restructuring was in order and decided to more broadly and clearly delegate authority so that the board of directors could take more time to consider basic issues and make decisions. To that end, all operations were split into 14 separate divisions. Each division had consolidated functions for production, sales, research, applications engineering, planning, and profit and loss accounting. The divisions operated within a pre-determined operational scope for which they were responsible globally. The management groups of each division comprised scientists and technicians as well as sales and production management staff members, and domains were restructured with clearly delineated operations.

Half of the directors were in charge of divisions while the other half oversaw the 10 coordination departments : 1) plant and technical management (domestic), 2) international production, 3) sales, 4) research, 5) applications engineering, 6) engineering, 7) finance and accounting, 8) legal affairs, patents, and taxes, 9) procurement, and 10) human resources and social issues. Performance evaluations for each division were, as a principle, conducted by two directors who were entrusted by the board of directors to audit each division as a part of their overall set of responsibilities. Additional staff departments were deployed and they had two critical roles : producing preparatory communications for all work committees and securing broad cooperation within the company.⁶⁴

62 Farbwerke Hoechst AG, *Geschäftsbericht 1969*, S.14, K. Winnacker, *Nie den Mut verlieren. Erinnerungen an Schicksalsjahr der deutschen Chemie*, Düsseldorf, 1972, S.178–9, S.504.

63 *Ebenda*, S.184.

64 Farbwerke Hoechst AG, *a.a.O.*, S.14–7, K. Winnacker, *a.a.O.*, S.451, S.463–4, S.505.

A system of collegiate management for the divisions was thus put in place. Advantages of this organization, launched on January 1, 1970, included securing effective cooperation in each division, logically allocating functions, global coordination, and prompt attention to any coordination needed in intra-divisional areas of small groups. At this stage, the board of directors decided to return to the specialization of production and sales held by board of directors' members for all divisions reporting to them.

⑥Hüls Case Study

Hüls had begun to deploy a divisional structure by the mid-1950s in the areas of rubber, catalysts, and textiles. Until a divisional structure was fully deployed in the 1970s, they used what was a fundamentally functional structure, comprising four functional departments: production, research, commerce, and human resources and legal affairs. However, due to increasingly intense competition in global markets, the growing scale of production and rapid advances in science and technology, greater changes in production and marketing became necessary. Along with these changes, the serious problems that occurred in the postwar era under the existing organizational structure, particularly with diversification during the 1960s, were a major factor in restructuring. The restructuring addressed the crucial need for directors to be freed from daily activities and detailed matters so that they could attend to more fundamental duties that are larger in scope, the need for stronger efforts to mobilize workers with specialized knowledge in managing plant groups, and the need to entrust these workers with details so that they could participate in decision-making systems and processes.

In this manner, the process of divisional structure deployment moved forward with new vigor in the early 1970s, and was finally deployed in 1972. The organizational structure deployed to realize these goals was a product divisional structure with six divisions: 1) raw materials and inorganic chemicals, 2) organic chemicals, detergents and cleaners, 3) thermoplas-

65 Farbwerke Hoechst AG, *a.a.O.*, S.14-5.

66 G. P. Dyas, H. T. Thanheiser, *op. cit.*, pp.122-3.

67 C. Kleinschmidt, *a.a.O.*, S.270.

68 Neue Organisation bei Hüls, *Der Lichtbogen*, 22. Jg, Nr.160, Juli 1970, S.26, B. Lorentz, P. Erker, *Chemie und Politik. Die Geschichte der Chemischen Werke Hüls 1938-1979: Eine Studie zum Problem der Corporate Governance*, München, 2003, S.270.

69 Neue Organisation bei Hüls, *Der Lichtbogen*, 22. Jg, Nr.160, 1970, S.26.

70 *Hüls Archiv*, I -5-8, Einige Überlegungen zu den Möglichkeiten einer Organisationsänderung bei CWH, S.1, *Hüls Archiv*, ohne Signatur, Niederschrift über die Sitzung des Vorstands am 3. April 1970 in Münster, Sitzungssaal der Landesbank (11. 5. 1970).

71 C. Kleinschmidt, *a.a.O.*, S.270.

72 *Hüls Archiv*, ohne Signatur, Niederschrift über die Besprechung in Hüls am 14. Juni 1971, S.2, *Hüls Archiv*, ohne Signatur, Vorstandssitzung vom 6. 7. 70 (6. 7. 1970), S.4, Neue Organisation bei Hüls, *Der Lichtbogen*, 22. Jg, Nr.160, Juli 1970, S.26.

tics, 4) polycondensates and paint materials, 5) rubber, and 6) energy (later nitrogen and agricultural chemicals). These divisions were designed to function as independent units both technically and financially, each with its own production and sales operations. Each division acted as a quasi-independent company with business policies set by the board of directors. Responsibility for management of their spheres of operation was given to two people, a production and sales specialist, creating a collegiate management structure based on a board-majority system. In addition, the organization had 10 central corporate departments which contained for example R&D, finance and accounting, legal and tax affairs and patents that operated on a corporate-wide basis. Seven staff departments provided advice and assistance to the board of directors, divisions, and the central corporate departments. In this manner, broad areas of authority and responsibility were delegated to the divisions for short-term, daily operations, and in doing so, top management created an organization in which they could focus on the creation of long-term plans, their primary job, rather than daily operational work.⁷³ Moreover, a new concept for business planning and control was implemented, with a standing corporate planning committee. This committee was involved with deploying new control mechanisms and in improving short-, mid-, and long-term planning.⁷⁴

As we have seen, in deploying a divisional structure, US consulting firms played a significant role at BASF and Henkel. In contrast, Hüls used Bayer, BASF, and Hoechst as examples to follow,⁷⁵ and this was a major difference.

Furthermore, although other chemical companies, such as Continental and Freudenberg, deployed divisional structures, these deployments had unique characteristics defined by their corporations. As noted above, generational changes acted as important mechanisms in effecting organizational restructuring. For example, Glanzstoff's change to a divisional structure was mediated by older entrepreneurs like R. Vits and L. Vaubel. Other corporations accepted the advice of US consulting firms; however, they adopted an organizational structure that was

73 *Hüls Archiv*, ohne Signatur, Niederschrift über die Sitzung des Vorstands CWH am 17. Juli 1970 in Schloß Raesfeld (5. 8. 1970), Neue Organisation bei Hüls, *Der Lichtbogen*, 22. Jg. Nr.160, 1970, S.26–7, B. Lorentz, P. Erker, a.a.O., S.270–1.

74 Vgl. *Hüls Archiv*, VI–8–3/1, Die Schrift über die ständige Kommission “Unternehmensplanung” und Sachbearbeiter für die Planung (15. 12. 1969), *Hüls Archiv*, VI–8–3/1, Besprechungsbericht von 1. Sitzung der Kommission “Unternehmensplanung” (5. 2. 1970), *Hüls Archiv*, VI–8–3/1, Besprechungsbericht von 2. Sitzung der Kommission “Unternehmensplanung” (27. 2. 1970) *Hüls Archiv*, VI–8–3/1, Besprechungsbericht von 3. Sitzung der Kommission “Unternehmensplanung” (1. 10. 1970), *Hüls Archiv*, VI–8–3/1, Langfristige Unternehmensplanung (11. 12. 1969), B. Lorentz, P. Erker, a.a.O., S.271.

75 *Hüls Archiv*, ohne Signatur, Niederschrift über die Sitzung des Vorstands am 3. April 1970 in Münster, Sitzungssaal der Landesbank (11. 5. 1970), S.1 u S.5, B. Lorentz, P. Erker, a.a.O., S.270–1.

different from a US-style divisional structure. For example, Continental was being advised by McKinsey and restructured on the basis of their consultation, establishing divisions that were an amalgamated organization that maintained functional departments. Thus, one can find examples of different structures as well as combined divisional and functional structures even in corporations that have deployed divisional structures and have undergone decentralization.⁷⁶ That said, the following management issues inevitably arise under functional structures as diversification advances. One issue was the difficulty encountered by each department's head manager in keeping pace with basic functions such as the production, sales, and procurement of a division in which multiple, vastly different product lines are managed together. Another was the top management's frustration with making administrative decisions rather than entrepreneurial, executive decisions, such as allocating corporate or long-term business resources.⁷⁷ As observed in these case studies of representative corporations, most companies that underwent diversification were forced to pursue organizational restructuring to resolve these managerial issues. Therefore, reforms based on restructuring principles found in divisional structure were the norm.

(2) Deployment of Divisional Structures in the Electrical Industry and its Characteristics

① AEG Case Study

We will next consider the deployment of divisional structure in the electrical industry, where diversification proceeded as in the chemical industry, and the divisional structure was important because of the nature of the business.

At the time that AEG restructured its corporate group after the war, the decision-making structure was based on principles of centralization. All important decisions were managed by the board of directors or by the chairman himself. Production management was simply organized into work domains, and its authority remained small. However, the breadth of these functions subsequently grew considerably both in scale and from the addition of new activities, and the first post-war organizational restructuring began in 1957. The organization had previously accommodated small, simple corporations, and AEG was in danger of losing its ability to obtain a clear overall picture of the corporation. In their organizational reforms, each product group was restructured vertically, operational departments were integrated into divisions and authority for business execution was delegated to the division's general manager. How-

76 C. Kleinschmidt, *a.a.O.*, S.269-70.

77 H. E. Kroos, C. Gilbert, *American Business History*, New Jersey, 1972, p.253.

78 G. Hautsch, *Das Imperium AEG-Telefunken : Ein multinationaler Konzern*, Frankfurt am Main, 1979, S.151.

ever, they lacked, for example, horizontal departments for management of such functions as managerial economics of overall corporate group finance, human resources, or marketing. Divisions took responsibility for overall operations in their domains of specialization, in particular development, factory worker placement, production, production planning, sales planning, pricing policies, and sales strategies. The goal of this organization was to deal with the various needs that were derived from the increasing amounts of business by (1) enabling divisions to make their own business policies based on a clear overview of the entire business from a technical and commercial perspective, (2) accurately grasping the overall costs and performance for each division, (3) creating unified pricing policies, (4) simplified operations, (5) a strict integration of activities related to shared technology, and (6) more clearly defined responsibilities.

However, changes beginning in the late 1950s made organizational reform an important issue, such as rapid technological advances, expansion of activities, greater competition due to internationalization efforts in a better integrated EEC, more products, expanded sales channels, and the development of business policies more focused on the creation of demand for new products.⁸¹ Confronted with worsening revenue situation at the close of the 1950s, implementing corporate group reorganization became a crucial topic, and the use of US consulting firms' experience was deemed necessary. However, the new organization established on October 1, 1963 employed a new management structure based on that used by GE in the US, with small- and medium-sized business units empowered with authority and an executive team that simply acted as a coordinating unit. The organization was vertical in terms of business domains, rather similar to those seen in the US or UK. The new organization had five departments: 1) energy production and distribution, 2) energy use, 3) transportation, 4) industrial supply, and 5) home appliances. These departments each managed their own procurement, research, production, and sales. Therefore, strengthening of the department head's responsibility, greater flexibility and stricter management in each division were pursued. In addition to these five vertical departments, the new organization featured eight horizontal departments: 1) marketing, 2) R&D, 3) production, 4) commercial business, 5) finance, 6) a general secretariat, 7)

79 P. Strunk, *Die AEG. Aufstieg und Niedergang einer Industriegeschichte*, 2. Aufl., 2000, Berlin, S.70.

80 *AEG Archiv*, GS 839, Rundschreiben Nr.14/57, Neue Organisation der AEG (9. 7. 1957), S.1, S.3.

81 *AEG, Bericht über das Geschäftsjahr vom 1. Oktober 1962 bis 30. September 1963*, S.53, G. Hautsch, *a.a.O.*, S.151.

82 Vgl. *AEG Archiv*, GS 839, Rundschreiben RO 2, Bildung von Horizontalen und Vertikalen Bereichen (30. 5. 1963), *AEG, a.a.O.*, S.53, S.55, P. Strunk, *a.a.O.*, S.70–4, G. Hautsch, *a.a.O.*, S.151, Reorganisation bei wachsender Rentabilität. Relativ geringe Exportquote — Bau eines Atomkraftwerkes, *Der Volkswirt*, 17. Jg, Nr.12, 22. 3. 1963, S.492, J. Reindl, *Wachstum und Wettbewerb in den Wirtschaftswunderjahren. Die elektrotechnische Industrie in der Bundesrepublik Deutschland und in Großbritannien 1945–1967*, Paderborn, 2001, S.138, *AEG. Ein Konzern wird neu organisiert. Geschäftsjahr umgestellt — Verlustaufträge bei Schermaschinen*, *Der Volkswirt*, 18. Jg, Nr.25, 19. 6. 1964, S.1241.

public relations, and 8) exporting. Apart from the exporting department, these departments were responsible for assisting and coordinating with the entire corporation, though they had no command authority over the divisions.⁸³

Though the board of directors thus remained the body responsible for final decision-making for various problems, operational functions were further decentralized. Sixteen departments were created in the five divisions, and each division acted as a quasi-independent company solely responsible for all actions related to development, production, sales, and commerce within the scope of each division's policies.⁸⁴ The reorganization maintained the independence of subsidiary companies, and decentralized at a high level. However, coordination among the various departments and subsidiaries alone was insufficient, and it was obvious that the extremely decentralized organization had exceeded the objectives. As a result, the latter half of the 1960s brought a retrenchment of the relative independence at the division level, with departments and subsidiaries being consolidated into divisions. Divisions were integrated into five business fields (energy and industrial technology, communications and transportation technology, mass-produced goods, consumer goods, and office technology), and the newly-integrated subsidiaries were folded into these business fields as departments. Control over the horizontal departments of 1) finance, 2) planning and control, 3) human resources, 4) technology, and 5) regional affairs and materials was divided among five directors. Thus, it became possible for the corporate board of directors to maintain direct control of everything down to the field level, and mechanisms were put in place for decision-making.⁸⁵ Later, in 1967, three additional business fields were added for a total of eight: communications equipment; components; and radio, television, and recording equipment.⁸⁶ In 1969, these were once again reorganized into seven product divisions: 1) energy engineering, 2) communications and data systems technology, 3) transportation, 4) industrial supply, 5) components, 6) home appliances, and 7) radio, television, and recording equipment. In addition, horizontal departments were reorganized into seven groups: 1) marketing, 2) R&D, 3) production, 4) office management, 5) human resources and social issues, 6) finance, and 7) international affairs.⁸⁷

83 AEG Archiv, GS 839, Rundschreiben RO 2, Bildung von Horizontalen und Vertikalen Bereichen (30. 5. 1963), AEG, a. a. O., S.53, S.55.

84 Ebenda, S.54.

85 G. Hautsch, a.a.O., S.151-2.

86 Vgl. AEG-Telefunken AG, Bericht über das Geschäftsjahr 1967, S.33-44.

87 Vgl. AEG Archiv, GS 3501, Struktur-Organisation, Gesamt-Stellen-Übersicht, Ausgabe 1970 Organisationsplan (Stand 1. 11. 1969), AEG-Telefunken AG, Bericht über das Geschäftsjahr 1969, S.39-50.

②Siemens Case Study

Furthermore, US Principles of organization played an important role in Siemens' organization during the 1960s. The rapid growth of all Siemens' business units after the war not only encouraged the integration of power engineering and low-voltage technology, but also caused redundancies in development and production. This trend eventually forced an organizational restructuring. The first step in 1966 was the consolidation of the three parent companies of Siemens & Halske, Siemens-Schuckert, and Siemens-Reininger-Werke into one business unit called Siemens AG. This bold move created a very positive corporate image for global markets. However, Siemens needed to create manageable business units without redundancies to respond to rapid advances in technology.⁸⁸

Moreover, market conditions provided impetus for organizational restructuring in Siemens.⁸⁹ The latter half of the 1960s had increased Siemens' scale to the point where centralized management became impossible, and the diversity and breadth of product programs required the creation of divisions. It was already becoming impossible to maintain a traditional split along the low-voltage current sector and heavy current sector lines, and a significant amount of redundancy would result between the two sectors. Moreover, there were redundancies in authority causing conflict between the sectors. As a result, it was believed that strengthening competitiveness might have a synergistic effect. Further growth for the group required greater transparency in operations, making organizational reforms an urgent issue.⁹⁰

The new company was reorganized into six groups on October 1, 1969, with regional offices and regional companies as well as five corporate departments. Siemens' divisional structure into six business domains comprised 1) components, 2) data systems technology, 3) energy engineering, 4) installation technology, 5) medical technology, and 6) communications technology, with each of these divisions being given the most independence in business affairs. In addition, the organization had five functional corporate departments that dealt with corporate-wide affairs: 1) managerial economics, 2) finance, 3) human resources, 4) technology, and 5) sales. These departments acted in an advisory and coordinating capacity, and the organization as a whole took on a matrix-like character.⁹¹

88 W. Feldenkirchen, The Americanization of the German Electrical Industry after 1945. Siemens as a Case Study, A. Kudo, M. Kipping, H. G. Schröter (eds.), *German and Japanese Business in the Boom Year. Transforming American Management and Technology Models*, London, New York, 2004, pp.126–7.

89 Die Neuorganisation des Hauses Siemens, *Zeitschrift für Organisation*, 39. Jg. Nr.8, 1970, S.338.

90 S. Hilger, *a.a.O.*, S.214–5.

91 Siemens AG, *Bericht über das Geschäftsjahr vom 1. Oktober 1968 bis 30. September 1969*, S.14–5, Die Neuorganisation des Hauses Siemens, *Zeitschrift für Organisation*, 39. Jg, 1970, S.338, W. Feldenkirchen, *op. cit.*, p.127, S. Hilger, *a.a.O.*, S.216.

Each business domain or component unit within a domain was organized primarily on the basis of technological and market relationships, and with the decentralization of decision-making according to products and product groups, much effort was put into making themselves self-sufficient, taking on responsibility for everything from development to sales. Business domains held profit responsibility along with authority over investment and human resources within the scope of corporate policy. The slowdown in Siemens' growth in the latter half of the 1960s motivated the deployment of profit centers as they were critical to decentralized management. In contrast, the five corporate departments were there to ensure cooperation and control conflict between the six business domains. The five corporate departments performed an advisory role to both the board of directors and the business domains, though they had no command authority.

Siemens' organizational restructuring was intended to foster "independence" as a concept and as a means for organizational reforms; thus, Siemens differed from other corporations in that they chose not to use outside consultants. This resulted in differences between Siemens' organizational restructuring during the 1960s and US corporations' deployment of divisional structures. New organizational concepts were based on principles of responsibility for products, functions, and regions, and the Siemens organization matrix differed significantly from the typical divisional structure used in US corporations on several points. Although Siemens aligned themselves with basic principles of divisional structures as developed in the US, they based their organizational changes on differing German conditions and focused on maintaining their integrated Siemens culture, prioritizing the company as a whole ahead of individual components.

(3) Organizational Restructurings in Other Industries and Their Characteristics

As is clear from the foregoing discussion, diversification occurred at high-levels in the chemical and electrical industries, and the deployment of divisional structure was significant if only for that reason. For comparison, we will also examine the iron and steel industry, where diversification seen in the chemical and electrical industries did not occur.

92 Die Neuorganisation des Hauses Siemens, *Zeitschrift für Organisation*, 39. Jg, 1970, S.338–40.

93 K. Yamamoto, *Gendai Doitsu no Chiiki Keizai (Contemporary German Regional Economy)*, Tokyo, 1993, pp.152–3.

94 S. Hilger, *a.a.O.*, S.229.

95 K. Yamamoto, *op. cit.*, p.152.

96 G. Tacke, *Ein Beitrag zur Geschichte der Siemens AG*, München, 1977, S.277.

97 S. Hilger, *a.a.O.*, S.215.

98 W. Feldenkirchen, *op. cit.*, pp.127–8.

99 *Ibid.*, p.131.

Mannesmann implemented organizational reforms in the late 1960s, dividing their corporate group into autonomous groups along the US model. In Rheinische Stahlwerke AG, a management shift in August 1968 (making T. Schmücker head of the company) prompted an organizational restructuring. The organization had previously been that of a holding company, managing only financial control and performing no other functions of a corporation. The countless redundancies encountered by the management of this multi-layered corporate group in production and sales stemmed from among its more than 30 subsidiaries. Mannesmann felt that a top-down, rather than bottom-up, “attack” style of management was not feasible. The plan for the new organization divided a variety of activities into the lowest level production domains, and then integrated them into 15 divisions. The deciding factors in the appropriation of divisions were the domains’ alignment with markets and technological commonalities in addition to seeking to eliminate the redundancies and disruptions that had existed. At the top level, divisions consisted of five integrated groups, each under a corporate group director. The purpose for establishing a new group was to make responsibility and management clear at the production domain, divisional and corporate group board of directors’ levels, in terms of management results and to enable greater flexibility and more rapid decision-making.

Similarly, Krupp, which operated in the iron and steel industry, had both an organizational restructuring and management change in 1968. Akin to Rheinische Stahlwerke AG, Krupp suffered from structural weaknesses as observed in their manufacturing companies, which were made up of many parts, and sales companies, in which many redundancies existed. This resulted in their decision to adopt organizational principles employed by major US corporate groups and to organizationally integrate similar or identical activities. They aimed to realize a more effective product classification than other corporate groups and the formation of a small number of large-scale business units, with each member of the Krupp group being given a high level of managerial responsibility.

3 Deployment of Divisional Structures and Establishment of Internal Control Organizations

—Deployment of Controlling Systems and Its Significance—

An important point in the deployment of divisional structures was the issue related to setting up internal control organizations. Controlling, which is a method of evaluation used to get a financial overview of overall business progress and performance, is in general known as the “controller” in the US. Although this office had already become an indispensable business or-

100 Wachablösung an der Ruhr. Bewährte Sechziger und nüchterne Vierziger, *Der Volkswirt*, 24. Jg, Nr.45, 7. 11. 1969, S.70.

ganization in US business management by the early 1950s, it was still in its infancy in Germany at that time. A post-US study trip report by RKW in 1957 noted that the controller's work in the US is future oriented, and that it builds an important foundation for planning and control functions. In contrast, German corporations sorely lacked future forecasting and calculation ability for profit planning and budgetary control.¹⁰¹

However, circumstances changed greatly after that period. Factors increasing the complexity of work, such as corporations' expanding scale, deployment of new technologies, increases in the pace of change, and changes in environmental conditions, increased the need for corporate information, coordination, and control as the planning function expanded.¹⁰² Moreover, with corporate expansion and changes in competition, accounting systems needed to be revamped to allow more powerful control and planning of a company's flows and processes. It was in these circumstances that US controlling methods as their answer.¹⁰³

In addition to these factors, the deployment of divisional structures made the need for deployment of an accompanying controlling system absolutely critical. As deployment was conducted, controlling became a way for top management to monitor the results of each division, rather than a tool for middle management to perform after-the-fact evaluations. The position of controller or chief financial officer (CFO) as a director was born of this objective. For German corporations, these changes were extremely important, and as a result, they retained the original English words of "controlling" or "controller" for use as loan words.¹⁰⁴

The delay in deploying divisional structures was an important reason for the delay in deployment of controlling systems in German corporations. Unlike US corporate law, German corporations had a sufficient control mechanism in the supervisory board. Thus, the use of controllers was not organizationally necessary until the 1960s. Literature introducing the US controller system could be found as early as the 1950s, and Germany became familiar with it over time. However, the accounting system as a management system or alternatively a controlling system that integrated control, planning, and coordination functions began to be deployed

101 RKW, *Betriebsführung durch Planung und Kontrolle: Eindrücke von einer Studienreise deutscher Betriebswirtschaftler aus Wissenschaft und Industrie. Team-Bericht* (RKW- Auslandsdienst, Heft 51), München, 1957, Zusammenfassung, S. Hilger, *a.a.O.*, S.226.

102 J. D. Auffermann, Der Controller — eine unternehmerische Persönlichkeit, in: RKW, *a.a.O.*, S.43–4, S.54–6.

103 C. Kleinschmidt, *a.a.O.*, S.276.

104 S. Hilger, *a.a.O.*, S.278.

105 H. G. Schröter, *Americanization of the European Economy. A Compact Survey of American Economic Influence in Europe since the 1880s*, Dordrecht, 2005, pp.109–10.

106 C. Kleinschmidt, *a.a.O.*, S.278.

107 Vgl. H.-G. Abromeit, *Amerikanische Betriebswirtschaft. Die Praxis der Unternehmungen in den USA*, Wiesbaden, 1953, Fünftes Kapitel, RKW, *a.a.O.*, P. Horváth, *Controlling*, 4. Aufl, München, 1992, S.54.

along with organizational restructuring in corporations more commonly during the latter half of the 1960s, after which US controlling methodologies spread more vigorously.¹⁰⁸

Controlling was aligned with the US model, and the integrated coordination system comprising planning, execution, and control functions was actually superior in functionality to that of the three functions operating separately. On this point, there was an essential characteristic of the deployment of these methodologies that provides evidence of how US management methods could cover such a broad spectrum of corporate management domains in German organizations, one section after another.¹⁰⁹ However, the responsibility of German managers engaged in the controller function was narrower than that of their US counterparts, and their participation in strategy setting and active problem solving of actual product and market issues was not common.¹¹⁰ In addition, management of cost-effectiveness, analysis of economic efficiency and profitability, calculations for planning, budget revisions, and other controller responsibilities being undertaken by a central managerial economics department or other decentralized department was characteristic.¹¹¹ Through the 1970s, a gap existed in the two countries' breadth of a controller's functions.¹¹² However, controlling as both a combination of roles and a management concept did occur in West German manufacturing corporations and saw a trend toward emulation of its US counterpart.¹¹³ From the latter half of the 1960s, changes in the economy and market policies guided German corporations to gradually deploy systematic corporate management aligned toward profit as was the American model. However, the modern US management perspective that corporate performance could be controlled clashed with that of traditional bookkeeping traditions of German accounting.¹¹⁴

In reviewing individual case studies such as Henkel, we find that the use of controlling methodologies advanced in response to the organizational restructuring that occurred in the latter half of the 1960s, and a unified system of accounting on a corporate group scale began. In Siemens AG, unification of accounting systems or modern controlling was first implemented in the latter half of the 1960s as they underwent organizational restructuring.¹¹⁵ In addi-

108 C. Kleinschmidt, *a.a.O.*, S.276, S.282.

109 *Ebenda*, S.277.

110 G. P. Dyas, H. T. Thanheiser, *op. cit.*, p.137.

111 C. Kleinschmidt, *a.a.O.*, S.282.

112 H. Siegart, *Worin unterscheiden sich amerikanisches und deutsches Controlling? Management-Zeitschrift*, 51. Jg, Nr.2, Februar 1982, S.99.

113 D. Hahn, *Organisation des Controllings in der deutschen Industrie*, W. Goetzke, G. Sieben (Hrsg.), *Controlling, Integration von Planung und Kontrolle: Bericht von der 4. Kölner BFuP-Tagung am 22. und 23. Mai 1978 in Köln*, Köln, 1979, S.80.

114 S. Hilger, *a.a.O.*, S.239.

115 *Ebenda*, S.227-8.

tion, the head of the managerial economics department, one of their five corporate departments, would become Siemens AG's "controller". However, other corporations had a longer history of the deployment and persistence of this position. For example, the concept of "controlling" finally became more commonly used as an everyday term in Freudenberg as they entered the 1980s. Moreover, at Volkswagen, the controller was the head of the managerial economics department, which was divided into the fields of "general managerial economics," "technical managerial economics," and "strategy and investment" until the mid-1980s. Planning and controlling were important functions of the controller.¹¹⁶

Based on the foregoing discussion, one can see German characteristics in the following points: First, the scope of managers engaged in the controlling function as a support mechanism for profit planning and budgetary control after the deployment of divisional structures was much narrower than that of their US counterparts. Second, it was not common for controlling to be actively involved in strategy setting or other critical functions. Third, the controlling function existed not only at the corporate level, but also in the decentralized operational departments.¹¹⁷

IV The Role of US Corporations and Consulting Firms in Management Organization Reforms

1 Management Organization Reforms and the Role of US Corporations

We will now discuss the role played by US corporations and consulting firms in management organization reforms and the deployment of the divisional structure.

First, let us look at the role of US corporations. Among the largest German corporations, several, including Siemens, AEG, Bayer, Bosch, and Hoechst, made the transition from a functional structure or holding company organization to a divisional structure on their own, without the help of consulting firms.

At AEG, for example, close ties with GE's top management played an important role. Specialists from GE participated in a study of organization-related solutions undertaken for organizational restructuring in 1966 and 1967, and they supported AEG in restructuring their organization.¹¹⁸ According to G. Tacke, then the Siemens chairman of the board, Siemens performed organizational restructuring without relying on consultants for the following six rea-

116 G. Tacke, *a.a.O.*, S.277.

117 C. Kleinschmidt, *a.a.O.*, S.283.

118 G. P. Dyas, H. T. Thanheiser, *op. cit.*, pp.121-2.

sons. 1) It was impossible for outside consultants to obtain a comprehensive overview of the company in a timely manner, given Siemens' size. 2) Because of their size, Siemens also needed their own internal consultants, and expected them to have continual communication with the outside world in their areas of specialty. 3) A new organization had been in the works by a handful of people for several years, and their work had progressed to at least include the principles of the restructuring and a large framework had reached a certain level of maturity by the time they were ready to begin work on organizational reforms. 4) Siemens neither pandered to the latest fads, nor completely changed their mature ideas. 5) Not much credence was given to external ideas because they thought that implementing homegrown ideas was simpler than implementing outside ideas. 6) Siemens was concerned about being manipulated by outside consultants. Because of these factors, when time came for organizational restructuring, Siemens carefully researched what was performed at other corporations in Europe and the US, and sought their own organizational theory.¹¹⁹

The principles behind the US developed vertical or divisional structure were widely debated in European management and financial publications, and this greatly influenced Siemens' new organization. Siemens had developed the basic concept of the organization by 1966. However, the US organization model aided Siemens' restructuring as Siemens entrenched themselves in their own concepts and by providing insight to the internal organizational limits and weaknesses of such organizations by observing the US system, which was already in use among their competitors.¹²⁰ In addition, Hoechst sought their own solution rather than relying on outside consultants, though they referenced case studies of US corporations. Hoechst's board of directors and supervisory board chairman, K. Winnacker, noted that US corporations were happy to supply information on the state of their own organizations.¹²¹¹²²

Even among corporations that did not rely on consulting firms and instead worked on organizational reforms on their own, contact with US corporations and the know-how obtained from this contact had a great impact. Moreover, with Henkel, where SRI made important contributions to organizational reforms, the experiences of DuPont, P&G, Westinghouse, and other typical US corporations that had adopted a divisional structure were found to be useful, as we noted above.¹²³

119 Interview der Z Für O mit Herren Dr. Gerd Tacke, dem Vorsitzenden des Vorstandes der Siemens AG, über die Neuorganisation des Hauses Siemens, *Zeitschrift für Organisation*, 39. Jg, Nr.8, August 1970, S.343–4.

120 W. Feldenkirchen, *op. cit.*, pp.127–8.

121 G. P. Dyas, H. T. Thanheiser, *op. cit.*, pp.121–2.

122 K. Winnacker, *a.a.O.*, S.231.

123 C. Kleinschmidt, *a.a.O.*, S.264.

2 Management Organization Reforms and the Role of US Consulting Firms

Next, let us look at the impact and role of consulting firms. Unlike the knowledgeable partner's role in technology transfers, US management consulting firms took on the role of intermediaries for the US model and contributed significantly to the deployment of corporate organization forms found in US corporations primarily in the period after the mid-1960s.¹²⁴ The most important management reform promoted by US consulting firms was the divisional structure.¹²⁵ If one observes the top 100 German firms, more than half deployed divisional structure only after 1967, and as such these corporations lacked experience in undertaking such new measures or processing the paperwork required to make use of organizational structures.¹²⁶ For that reason alone, US management consulting firms had the opportunity to make a great impact. Outside consultants were particularly important not only in their contributions made on the basis of their know-how, but also their recommendation regarding redistribution of responsibilities at the board of directors level, where the directors themselves most probably would not have worked on these issues internally.¹²⁷

After the 1950s, as corporations increasingly concentrated on strategies and issues of corporate organization, McKinsey and other new-generation US consulting firms emerged with their expansion into Europe as the 1950s came to a close.¹²⁸ A striking characteristic of the Americanization of industry in the period shortly after the war ended was the relatively limited impact of US management consultants. However, upon entering the 1960s, and with the deployment of divisional structures, US management consultants took a leading role in the international businesses of their clients.¹²⁹

Thus, we see that US consulting firms were powerful intermediaries in the implementation of management organization reforms. Among them, McKinsey had the most influence.¹³⁰ Booz Allen & Hamilton had a special reputation for production management systems in the sphere of production and manufacturing. Arthur D. Little was famous for its marketing advice and specialized knowledge of operations research. In contrast, McKinsey concentrated on the is-

124 *Ebenda*, S.274.

125 M. Kipping, American Management Consulting Companies in West Europe, 1920 to 1990, *Business History Review*, Vol.73, No.2, summer 1999, p.209.

126 G. P. Dyas, H. T. Thanheiser, *op. cit.*, p.129.

127 *Ibid.*, pp.114–5.

128 M. Kipping, *op. cit.*, pp.205–7.

129 J. Zeitlin, Introduction : Americanization and Its Limits : Reworking US Technology and Management in Post-War Europe and Japan, J. Zeitlin, G. Herrigel (eds.), *Americanization and Its Limits. Reworking US Technology and Management in Post-War Europe and Japan*, Oxford University Press, 2000, p.26, H. G. Schröter, *op. cit.*, p.110.

130 U. Wengenroth, *op. cit.*, p.162.

sues of top management, and had a decisive role in reforms leading to divisional structures in European corporations. It was involved in the deployment of divisional structures in 12 largest corporations of Germany, and other consulting firms worked with at least 6 corporations in the top 100.

For example, BASF researched group organization and structure, both domestically and internationally in 1968, and requested a recommendation and proposal on organizational structure from McKinsey. Organizational reforms based on the advice and proposal from this most powerful consulting firm was given great significance because of the effective utilization of their diverse experiences. Although BASF had worked on additional organizational reforms from the late 1970s through the early 1980s, they terminated their cooperation with McKinsey as a management consulting firm in mid-February of 1981 because that project was completed.

As US management consulting firms planned to expand into Europe in the early 1960s, they sold US know-how to managers in the region who were working on organizational structure reforms. In comparison with foreign countries, however, the role of McKinsey and other consulting firms in Germany was much smaller, particularly, in comparison with their impact in the US and UK. Apart from certain corporations, their influence in Germany was relatively limited.

V German Characteristics of Deployment of Divisional Structure

Based on the foregoing discussion, let us now examine German characteristics of the deployment of divisional structure. Thus, we can observe the impact level of delegation of authority and responsibility, the traditions of the board of directors along with collegiate management and the board-majority system, the role of top management in divisions, the use of a

131 H. G. Schröter, *op. cit.*, p.66, p.110, M. Kipping, *op. cit.*, pp.209–10.

132 G. P. Dyas, H. T. Thanheiser, *op. cit.*, p.112, p.120.

133 *BASF Archiv*, C 0, Die Schrift an die Mitglieder der Direktionssitzung (26. 8. 1968), S.1–2, *BASF Archiv*, C 0, Die Schrift an die Mitglieder der Direktionssitzung (21. 10. 1969).

134 Vgl. *BASF Archiv*, C 0, Die Weiterentwicklung der Organisation (20. 3. 1981. 3. 21), *BASF Archiv*, C 0, M. Seefeldler, Weiterentwicklung der Organisation. Direktionssitzung am 5. März 1981, *BASF Archiv*, C 0, Die Weiterentwicklung der Organisation (20. 3. 1981), *BASF Archiv*, C 0, Weiterentwicklung der Organisation kommt voran (in : *BASF Information* (23. 7. 1980)), *BASF Archiv*, C 0, Neuorganisation der Aufgabengebiete in der BASF (in : *BASF Information* (17. 7. 1980)).

135 C. D. McKenna, The Origins of Modern Management Consulting, *Business and Economic History*, Vol.24, No.1, fall 1995, p.57.

136 M. F. Guillen, *Models of Management. Work, Authority, and Organization in a Comparative Perspective*, Chicago, 1994, p.149, M. Kipping, The U. S. Influence on the Evolution of Management Consultancies in Britain, France, and Germany since 1945, *Business and Economic History*, Vol.25, No.1, fall 1996, pp.117–21.

compensation system linked to corporate results, and the high number of holding companies among the largest manufacturing firms.

1 Divisional Structure Mechanisms and Their German Characteristics

We now examine various German characteristics from the perspective of divisional structure mechanisms. In the role of top management, one can observe many different applications of collegiate management in new organizations, and it is believed that there were three main alternatives. The first was having directors act as divisional general managers. Of the largest 100 enterprises, this alternative was most often seen in relatively small scale corporations. The responsibility for divisional profits in these cases rested upon top management, who were also collectively responsible for corporate-wide results. In these corporations, a controller or a position with an equivalent function existed, with a member of the top management taking such a position. The second alternative was placing divisions underneath directors who specialized in particular functions, with joint management of divisions further performed by managers who had specialized in particular functions. This was primarily conducted in corporations in the chemical industry, and in these cases profit responsibility resided in specialized management teams that were collectively responsible for directors. The directors themselves were typically responsible for a division's technical or commerce aspects and coordinating with staff or were responsible for both aspects. The third alternative was to have directors manage a group of divisions as observed in extremely large corporations such as Siemens, AEG, and Bayer. In these instances, two or sometimes more directors managed jointly, though sometimes a single director would be managing the group. Directors were usually the heads of either the division group or staff, and sometimes both.¹³⁷

Regarding compensation systems, unlike the US where the compensation of a general manager, who was responsible for the profit of a division, is often tied to that division profits, use of performance linked financial incentives for general managers based on profit and profit responsibility are extremely rare. The introduction of incentives of this sort were often even deemed undesirable.¹³⁸ Of the 19 capital corporations with divisional structures for which information is available, all had some type of payment system for special allowances. However, in an overwhelmingly high number of cases, these incentives neither built a large portion of the general managers' net income, nor was there a clear connection to divisional profits. Apart from 1 company that paid special allowances based on actual performance versus target per-

137 G. P. Dyas, H. T. Thanheiser, *op. cit.*, pp.123-5.

138 *Ibid.*, p.138.

formance and 2 companies that considered division results via a special allowance system that included corporate profits and divisional profits, the remaining 16 corporations made special payments based on corporate-wide profitability. In many cases, the US concept of divisions as profit centers had not been implemented. Thus, German corporations in general partially followed their own path in using the opportunities inherent in divisional structures. The possibility to strengthen profit orientation through the use of compensation systems or methods to generate internal competition, both based on divisional profits was not consciously considered in nearly all the 100 largest enterprises. Some of the reasons for the dismissal of such concepts are that German managers feel that creating direct links between divisional profits and a general manager's compensation was incompatible with corporate tradition or that the profit base was too unstable.¹³⁹ Even in cases where management responsibility was delegated to a general manager who reported to the board of directors, there was a great deal of opposition to providing the general manager with sufficient freedom and authority along with profit responsibility.¹⁴⁰ Of course, few of the largest corporations had delegated division management to lower levels and abolished the strict collegiate management tied to divisional management responsibility at the director level. In these methods, characteristics of the divisional structure in Germany and the US appear increasingly similar. However, there were also many other companies that left division management and the profit responsibility at the board of directors level.¹⁴¹

Related to the nature of management decentralization, the ratio of holding companies in the largest German manufacturing corporations (see III 1(1)) was relatively higher than that in the US.¹⁴² In transitioning from a holding company to a divisional structure, the holding company expanded and strengthened its control over subsidiaries. Changes of this type were characteristic of the aggressive contribution of holding companies to subsidiaries' internal issues. As we saw with transitions from functional structures to divisional structures, departments responsible for operations tended to have relatively low independence. A change from a holding company structure to a divisional structure could be seen in the 1960s; however, in several cases, such as Gutehoffnung, these were incomplete as of 1971.¹⁴³ The high ratio of holding companies was based on the characteristics of large German corporations wherein "corporate group structures

139 *Ibid.*, pp.126–7.

140 *Ibid.*, pp.118–9.

141 *Ibid.*, p.129.

142 The percentage of companies using a holding company as a management structure in the largest US industrial firms (189 in 1949; 207 in 1959; 183 in 1969) was no more than 3.7% in 1949; 1.4% in 1959; 2.4% in 1969. R. P. Rumelt, *op. cit.*, p.65.

143 G. P. Dyas, H. T. Thanheiser, *op. cit.*, pp.115–7.

developed around a single industrial system as its foundation,” a characteristic of large German corporations. It could be said that a holding company style management structure is simply the most compatible in such cases.

2 Management Traditions in German Corporations and Their Influence on the Deployment of Divisional Structures

When we examine traditional management in German corporations, as we see in all instances of “Americanization” up to that time, one characteristic can be seen in the new wave of organizational reforms formed along German traditions of cooperative corporate culture that emphasize technical skills. Similarities in the organizational structure compared with that in the US certainly reflected the relatively competitive, open business environment that created high technical standards in abundant markets along with industrial corporations’ strategies that leaned toward increasing diversity of product and market. However, differences in culture between Germany and the US were one factor in the differences in organization. Some of these differences are as follows. Management authority that was foundational to functions in US corporations, and that had broadly spread with decentralization, sharply contrasted with the hierarchical relationships and highly centralized hierarchies that were a cornerstone in German corporations during the first few years after the war. Originally, management authority in Germany tended to be exclusive, closely held by the managers themselves because authority based on trust in top management was considered to be superior to authority based on function. These ideas changed in response to the US influence, and the exclusiveness of management status decreased. However, traditions like these, rooted deep within the ideological foundations of management authority, greatly influenced the adoption and operation of divisional structures.

Another factor in the influence of traditional culture on German corporate management was the tradition of collegiate management and the board-majority system, which were unheard of in US corporations. In German corporations, the position of CEO, with one person having the independent authority to make decisions for the company as a whole, did not exist. The tradition of collegiate management, with the board of directors generally making decisions accord-

144 T. Yamazaki, *Sengo Doitsu Shinshyugi to Kigyo Keiei (German Capitalism and Business Management after World War II)*, Tokyo, 2009, Chapter 6.

145 U. Wengenroth, *op. cit.*, p.162.

146 G. P. Dyas, H. T. Thanheiser, *op. cit.*, p.128.

147 H. Hartmann, *a.a.O.*, S.271-2, S.282-3, S.286-9, H. Hartmann, *Authority and Organization in German Management*, Princeton, 1959, p.261, pp.271-2, pp.274-7.

148 G. P. Dyas, H. T. Thanheiser, *op. cit.*, pp.106-7.

ing to a majority vote, differed greatly from the US in its pattern of delegation of responsibility as well as the relationship with reporting and management mechanisms. The practice of collegiate management was applied to the division management level for its allocation of assignments and responsibilities as well as to top management. This form of management was an important element in the cultural differences that emerged in organizational development.

Financial incentives for general managers via compensation systems linked to division results were extremely rare, reflecting the difference between German and US culture and values. US compensation systems ran the risk of potentially causing a general manager to lose objectivity in business judgment, with the plans negotiated between the division and corporate intensely conflicting with the interests of the division. Nevertheless, it has been pointed out that in general such notions are not based on actual experience with such compensation systems, they are reflections of cultural values and attitudes that clearly differ between the two countries. In such cultural factors, German corporate management traditions such as collegiate management were particularly influential.

In regard to the impact of these cultural and systemic factors, analysis and research of S. Hilger's case studies on Henkel, Siemens, and Daimler-Benz based on differing economic, political, cultural, and systemic conditions demonstrates that the adoption of the divisional structure in German corporations frequently led to results that varied from those in the US. Although Germany heavily relied on US know-how, in adopting the divisional structure, German corporations did not view the adoption as the simple imitation of a process, but, to a certain extent, as an adaptation to local conditions. The unquestioned acceptance of American knowledge had become a thing of the past, and was replaced by greater selectivity and confidence stemming from German managers' own ways of thinking and methods. Thus, organizational changes were not merely adaptations to strategy but were a cultural phenomenon. The further development of new organizations in the late 1960s indicates a generally decreased reliance on US innovations by German management, demonstrating that unquestioned acceptance of US solutions were a thing of the past. The priority had changed from seeking US models and knowledge to the selection of only those US ideas deemed worthwhile to Germany from the many offered by research literature and consultants.

149 *Ibid.*, p.137.

150 *Ibid.*, p.129.

151 *Ibid.*, pp.137-8.

152 S. Hilger, *a.a.O.*, S.213.

153 G. P. Dyas, H. T. Thanheiser, *op. cit.*, p.138.

154 *Ibid.*, p.102.

155 *Ibid.*, p.129.

Our discussions till now have examined the deployment of divisional structures in German corporations. In considering the compatibility of a new corporate structure based on the expansion of business domains in conjunction with diversification and the benefits of product division restructuring for an organization, we see that a German method of performing tasks was used in conducting such considerations. Specifically, a corporation's actual structure, management mechanisms and systems, and the use thereof reflect a corporate culture. It emphasizes technology rather than a sales and marketing point of view, a culture of collegiate management by a board of directors, the board-majority system tradition, the historical arc of delegation of authority, a single large corporate group structure founded on a single industry structure. In the deployment of management organizations such as the divisional structure, there was in fact a method compatible with the German method, and German corporations pursued those elements that could be adapted to German corporate culture.

Following table visualizes the conditions surrounding the introduction of American-style divisional structure as well as "re-framing" and the factors defining it, based on the discussion so far in this paper.

Table Americanization and Re-framing : German Characteristics of Divisional Structure

Management Methods		Organizational Reforms in the Divisional Structure
Deployment and Factors Affecting Them		
Overall Conditions in the Deployment of American Management Methods		<ul style="list-style-type: none"> · Expansion of deployment of principles for modifying divisional structures · Low rate of divisional structure adoption compared to the US and UK · Vast differences in divisional structure deployment among large corporations and small- or medium-sized businesses · High proportion of holding company structures in the largest companies compared with that in the US
Deployment Characteristics of American Management Methods		<ul style="list-style-type: none"> · Existence of matrix organizations in divisions and regional and functional departments · Amalgamations of divisional and functional structures · Deployments dependent on US consulting firms and corporations · Relatively less impact of consulting firms in Germany than in the US and UK · Specific motives for changing the structure from a holding company to a divisional structure (more efficient strategies and better coordination in formerly independent subsidiaries)
Modifications in American Management Methods		<ul style="list-style-type: none"> · Operations based on principles of collegiate management under a board of directors and a board-majority system · Systems of collegiate management within divisions · Cases of divisional structure deployments that were not self-support account systems · The deployment of compensation systems for general managers not linked to the division's performance · Points where the controlling function was responsible at the operational level as well as in headquarters
Amalgamation of American and German Elements		<ul style="list-style-type: none"> · Combining of mechanisms based on the principles of German collegiate management under a board of directors and the board-majority system with mechanisms in US-style divisions · Combining of principles of US-style product division systems and principles of German-style functional and regional departments · Cases on combinations of prewar German corporate organizations with a sub-committee in the board of directors and US committee organizations
Factors of "Re-framing" in Americanization	Influence of Traditions and Cultural Factors and Management Values on Business Management	<ul style="list-style-type: none"> · Ideological foundation of top management authority that strictly divides the board of directors from the overall labor hierarchy that is below middle management · The tradition and practice of collegiate management principles under the board of directors and the board-majority system · Executive resistance to providing sufficient authority and responsibility toward general managers · The tradition of cooperative corporate culture emphasizing technology
	Influence of Institutional Factors	<ul style="list-style-type: none"> · German corporations' slow pace of delegation of authority and decentralization of management · Slow pace of business management specialization (strong differentiation between top and daily management) · Diversification's suppressive effects through characteristics of ownership (particularly family ownership) in German corporations and their influence on divisional structure implementations · Large German corporations' institutional characteristics in large corporate group structures as a basis for industrial structures and the influence of the proportion of holding company structures among the largest corporations
	Influencing factors of the Structure of Productive Forces	—
	Influence of Industrial Structure Factors	<ul style="list-style-type: none"> · Influence of a high proportion of producer goods industries on the largest corporations' industrial sector composition (and its influence on adoption of each type of organizational structure)
	Influence of Market Structure Factors	<ul style="list-style-type: none"> · Market characteristics of quality and functionality and their reflection of the collaborative corporate culture that emphasized technology · Great reliance on exports to Europe (cases of European operations in product divisions and the separation of other regions' operations in regional departments)

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