On Good and Bad Bureaucracies: Designing Effective Quality Management Systems in the Agrofood Sector

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In the aftermath of several food crises, quality management systems have been widely introduced into the European agrofood sector. Nevertheless, the reactions of, for instance, farmers to these systems are at best mixed. One of the most common complaints is that quality management results in a huge bureaucratic workload. This paper refers to recent advances in the theory of bureaucracy in order to come up with some ideas about the design of quality management systems which might invalidate the criticism. It uses the *Quality and Safety* system which has been introduced into the German meat sector since 2001 as an example for demonstrating the applicability of the developed ideas.

Key words: design process; enabling bureaucracy; flexibility; implementation context; transparency

Quality management systems under discussion

Currently the introduction of quality management systems into the European agrofood sector makes feelings run high. On the one hand quality is viewed as a main determinant of the development of food markets. The early introduction of industry-wide quality assurance schemes, for instance, is considered one important reason for the competitive advantage of Dutch and Danish hog producers over their German competitors (Traupe, 2002). Furthermore, several food crises have increased the speed with which state-of-the-art quality management systems are making their way into the food sector. This development is strongly supported by the European Union. David Byrne, e.g., wants "… to see a quality-driven single market in foodstuffs" (Verhaegen and Van Huylenbroeck, 2002, preface) due to a growing interest of consumers in safe, wholesome and tasty food. Food and feed quality and safety, thus, has become one of the EC's preferred areas of regulation (e.g. Regulation 178/2002).

On the other hand there are also numerous critical assessments of the current trend towards intensified quality management in the agrofood sector. Many farmers feel incapacitated by the strict regulations imposed by quality management systems. For some commentators it is even "hard to see … what sense QS (the German version of the IKB system, L.T.) makes at all" (DLG-Mitteilungen, 5/2003, p. 5). As a consequence, many German farmers still reject the QS system and do not participate in the system at all or do not participate voluntarily but have been forced into the system by powerful customers, e.g. slaughterhouses. In a recent non-representative empirical study, Jahn, Peupert and Spiller (2003) analyzed the attitudes of German farmers towards the QS system. Many farmers view the quality standards as immature and undemanding. One of the most common complaints about the QS system is that it results in a huge bureaucratic workload. In open-ended questions, 32 out of 65 farmers considered bureaucracy the main disadvantage of the QS system. This is not a surprise since bureaucratization is a common complaint about quality management systems, not only in the agrofood sector (Schnauber, 1994; Schröder and Reinhardt, 2000; Kobjoll, 2000). It, thus, seems worthwhile having a closer look at quality management systems and quality assurance schemes from the point of view of the theory of bureaucracy.

Quality management systems as bureaucratic organizations

The term 'bureaucracy' can be traced back to the 18th century when absolutist monarchies developed their central administrations. The first use of this term is often ascribed to Vincent de Gournay (1712 to 1759). In his physiocratic analysis he called the civil servants who were considered unproductive bureaucrats (Derlien, 1992). Max Weber (1986) introduced thinking about bureaucratic organization into modern sociology and organization theory.

Weber was interested in the trend of rationalization, i.e. the practical application of knowledge to achieve better control over both the physical and the social environment. According to Weber, bureaucracy is rationalization applied to the organization of human activities. Bureaucracy relies on

rational-legal authority is based on impersonal rules which have been legally established. It is typical for modern societies and has widely replaced premodern forms of authority which rely on a belief in the sanctity of tradition (traditional authority) or the extraordinary personalities and appeal of leaders (charismatic authority).

Based on historical-comparative analysis, Weber identified several characteristics of the bureaucratic organization. The most important features of bureaucracies are

- Goal-orientation;
- Written rules of conduct and standardized procedures;
- Highly specialized division of labor;
- Hierarchy of authority with directives flowing down the chain of command and information flowing up;
- Official business conducted in writing;
- Operations guided by impersonal rules;
- Promotion of employees based on achievement;
- Appointment to offices according to specialized qualifications;
- Personnel have no property rights over the resources at their disposal.

Weber's theory of bureaucracy has heavily influenced social science thinking about organizations. Contingency theory, for instance, still relies on Weber's theory (e.g. Pugh and Hickson 1976). In modern organization theory, Weber's notion of bureaucracy is often reduced to three core elements: workflow formalization, specialization and hierarchy (e.g. Adler and Borys, 1996).

Weber described the ideal-type bureaucracy – a conceptually pure type of organization. When comparing this analytically clear type to empirical reality, deviations can be observed. Nevertheless, the ideal type serves as a measuring rod which allows researchers to contrast real bureaucracies to the theoretically consistent model.

A quick glance at quality management systems reveals that they are truly bureaucratic in nature. ISO 9001, for instance, "specifies requirements for a quality management system where an organization needs to demonstrate its ability to provide products that fulfill customer and applicable regulatory requirements" (ISO 9000 : 2000, p. 6). In doing so, it applies many of the aforementioned bureaucratic principles. Table 1 highlights some of the bureaucratic elements of ISO 9001.

Bureaucratic features can also be identified in quality assurance schemes in the agrofood sector, for instance IKB, Label Rouge and the BRC Standard. One recent example is the *Quality and Safety* (QS) system which has been introduced into the German meat sector since the year 2001 and is now spreading out to other subsectors (vegetables and fruits, potatoes). It views itself as an alliance in the food chain for active consumer protection. Similar to other quality assurance schemes, QS relies on the definition of standards, regular third-party audits and certifications. Bureaucratic features of QS include (see www.q-s.info; Theuvsen and Peupert, 2003):

- Goal-orientation: QS officially aims at recovering and strengthening consumers' trust in the correct and quality-conscious production of food, securing food quality and guaranteeing animal-friendly and environmentally safe production processes.
- Written rules: The standards of the QS system are laid down in detail in the QS System Manual, which specifies production and handling requirements for each part of the food chain – feed producers, farmers, slaughterhouses, meat processors, butcheries and retailers.
- Specialization / hierarchy of authority: QS clearly defines the responsibility of each system participant for the correct and complete documentation of production processes, the deployment of self-assessment procedures and the observance of rules laid down in the QS System Manual. These personal responsibilities are symbolically strengthened by the obligation to prefer written contracts (for example, between farmers and veterinary surgeons) and to personally sign important documents (such as delivery notes).
- Written communication and documentation: According to the QS System Manual, participants are obliged to document their production processes and identify, describe and document critical control points.
- Impersonal rules: Infringements of the QS System Manual are punished by a neutral sanction committee. The auditors are strictly obliged to neutrally audit the participants in the QS system.

➢ Specialized qualifications: In the QS system, auditors, veterinary surgeons and salmonella laboratories have to prove they have certain qualifications and work experience. Furthermore, several human resource development activities are compulsory.

Taking these aspects into account, it is not surprising that Jahn and her co-authors (2003) found that German farmers consider bureaucracy a major characteristic of the QS system. The farmers' complaints about the bureaucratic features of the system suggest that they view bureaucracy as something negative. But is this popular notion of bureaucracy accurate, or do bureaucratic organizations deserve a more balanced assessment?

Bureaucratic principles	ISO 9001 : 2000 Standard (examples)
Goal-orientation	• "Top management shall ensure that quality objectives … are established at relevant functions and levels within the organization." (5.4.1 Quality objectives)
Written rules	• "The organization shall establish and maintain a quality manual that includes … the documented procedures established for the quality management system …" (4.2.2 Quality manual)
Specialization	• "Top management shall appoint a member of management who … shall have responsibility and authority that includes a) ensuring that processes needed for the quality management system are established, implemented and maintained, b) reporting to top management on the performance of the quality management system …, and c) ensuring the promotion of awareness of customer requirements …" (5.5.2 Management representative)
Hierarchy of authority	• "Top management shall ensure that the responsibilities and authorities are defined …" (5.5.1 Responsibility and authority)
Written communication and documentation	• "Records shall be established and maintained to provide evidence of conformity to requirements …" (4.2.4 Control of records)
Impersonal rules	• "A documented procedure shall be established to define requirements for a) reviewing nonconformities …, b) determining the causes of nonconformities, c) evaluating the need for action …, d) determining and implementing action needed, e) …, f) reviewing corrective action taken." (8.5.2 Corrective action)
Specialized qualifications	• "Personnel performing work affecting product quality shall be competent on the basis of appropriate education, training, skills and experience." (6.2.1 Human resources – General)

Table 1. Bureaucratic features of ISO 9001.

Bureaucracies: Good or bad?

For Weber (1986, p. 227) the "decisive reason for the advance of bureaucratic organization has always been its purely technical superiority over any former organization. The fully developed bureaucratic mechanism compares with other organizations exactly as does the machine with non-mechanical modes of production." In bureaucratic organizations, "precision, speed, unambiguity, knowledge of the files, continuity, discretion, unity, strict subordination, reduction of friction and of material and personal costs" (p. 227) are raised to the optimum. This distinguishes bureaucratic organizations from premodern forms of authority. Traditional authority and charismatic authority are, for instance, less continous since obedience is owed to persons instead of impersonal rules.

It is important to keep in mind that Weber's positive assessment of bureaucratic organization only holds in comparison to premodern forms of authority. Furthermore, technical superiority is a rather

narrow efficiency criterion which only takes into account the formal rationality of decisions. Thus there is room left for the dark sides of bureaucracy. Weber (1986) also mentions power asymmetries based on differences in formal qualifications and the autocratic nature of bureaucratic organization. Those who control the large bureaucracies control the lives of their fellow human beings as self-appointed leaders. In Weber's theory, bureaucracy and oligarchy are two closely related conceptual cornerstones. In addition, Weber considers bureaucratic actions unjust in individual cases due to the strict employment of impersonal rules and objective considerations without regard to personal fates. The impersonality of bureaucracy results in dehumanization.

All in all, Weber's assessment of bureaucratic organization is much more mixed than usually recognized. This mixed assessment is confirmed by modern organization theory. On the one hand, we still find positive assessments and empirical findings stressing the importance of well-designed procedures for facilitating task performance, avoiding role conflicts and role stress, and triggering positive effects on commitment. There are even empirical studies which find a positive influence of bureaucracy on job satisfaction and innovativeness (Adler and Borys, 1996). But better-known and more in line with everyday opinions about bureaucratic organizations are those studies which emphasize the inefficiencies (or pathological symptoms) of bureaucracies (Derlien, 1992; Adler and Borys, 1996):

> New external threats are not recognized or digested due to a high degree of specialization and inflexible work assignments. The communication between the organization and its environment is underdeveloped.
> Departments create their own goals and pursue them even at the expense of the organization's overall goal.
> Rules are followed for their own sake due to the high degree of formalization of all work processes. This results in a strong preference for the status-quo.
> The tendency towards creating more and more rules favors rigidity, inflexibility and program and process conservativism. A fundamental redesign of rule systems and bureaucratic organizations often requires major crises.
> The hierarchy of authority creates control and implementation problems. Information about results and environmental conditions flowing up the hierarchy is filtered and distorted. Top management risks losing a clear picture of the environment and the situation of the organization.
> Bureaucracies abrogate individual autonomy and create social distance. This results in low job satisfaction, absenteeism, role stress, low work morale, feelings of powerlessness and self-estrangement and high fluctuation in staff.

Due to these negative assertions of the effectiveness and efficiency of bureaucracies, developing alternatives to bureaucratic organization has a long history in management theory. Nevertheless, the prevalence of bureaucratic elements in most modern organizations can be assumed to be a sign of something positive or even indispensable in the bureaucratic organization. In this context it is interesting to see that positive assessments of bureaucracy often pour out of the literature on quality management. This literature emphasizes the important role of well-designed procedures, regular statistical process controls, intensive documentation, clear specifications of responsibilities and so on (Deming, 2000; Pfeifer, 2001). As Table 1 offers by way of example, this philosophy prevails in such highly influential regulations as ISO 9001. Not surprisingly, Weber's theory of bureaucracy is considered one of the historical foundations of modern quality management (Luning, Marcelis and Jongen, 2002).

The assessment of quality management standards is as mixed as the attitude towards bureaucracies in general. ISO 9000 standards, for instance, are often regarded as additional control mechanisms. The increased formalization of processes and the ability to control through audits are viewed as vital for attaining quality objectives. But, on the other hand, it is also argued that ISO certifications reduce organizational flexibility and lead to an undesirable standardization of the management of organizations (Beck and Walgenbach, 2003). So the assessment of bureaucracy in general and quality management systems in particular reveals a dilemma. On the one hand, bureaucratization seems technically necessary when implementing advanced quality management systems. As a result we see strong trends towards increased bureaucratization in modern organizations (ISO 9000 Standards, Total Quality Management). On the other hand, bureaucratic organization has

many undesirable side-effects, e.g. reduced organizational flexibility and adaptability. As a consequence many organizations pursue bureaucratization and debureaucratization strategies at the same time. In order to suggest a solution to this dilemma and the obviously contradictory developments in organization design, this paper will take a closer look at some recent developments in the theory of bureaucracy. These developments root in the opinion that the traditional Weberian theory of bureaucracy cannot explain the aforementioned contradictory empirical results, assessments and organizational developments due to certain theoretical shortcomings.

Coercive and enabling bureaucracies

Based on empirical work in the automotive industry (Adler and Cole, 1993), Paul Adler (1999; Adler and Borys, 1996) argues that generally attributing good or bad characteristics to bureaucracies is a misconception. According to Adler, neither the negative nor the positive consequences are inherent in bureaucracies. In working out this idea in more detail, he focuses on formalization as a fundamental aspect of bureaucracies and distinguishes two dimensions of organizational design: the technical and the social structure. The technical structure is determined by the degree of formalization or level of bureaucracy. The efficiency of a high or low level of bureaucracy depends mainly on the degree of routineness of tasks. The social structure describes the way an organization structure functions, that is, the type of formalization. A coercive structure is designed "to assure that potentially recalcitrant, incompetent, or irresponsible employees do the right thing" (Adler, 1999, p. 38). An enabling structure, on the other hand, functions "to support the work of the doers rather than to bolster the authority of the higher-ups. … When bureaucracy takes this form rather than the more traditional, coercive form, even a highly bureaucratic structure will be experienced by employees as a tool with which they can better perform their tasks, rather than a weapon used by their superiors against them" (ibid.). Table 2 summarizes Adler's distinction between technical and social structure.

		Social structure	
		Enabling	**Coercive**
Technical structure	**Low level of bureaucracy**	Organic organization	Autocratic organization
	High level of bureaucracy	Enabling bureaucracy	Coercive bureaucracy

Table 2. A typology of organizational designs (Adler and Borys, 1996, p. 78; Adler, 1999, p. 39).

Coercive and enabling bureaucracies can be distinguished by their structural features (autonomy, internal and global transparency, and flexibility), design processes and implementation contexts (Adler and Borys, 1996; Adler, 1999).

In coercive bureaucracies the **autonomy** of employees is low. Rules are designed to prevent shirking; deviations from rules are suspect and mistrusted. Rules, thus, mainly serve as a device for controllers or superiors to assess whether the workers' actions are in accordance with the regulations. Rules neither give workers the opportunity to react to the peculiarities of the particular case, nor do they help to identify improvement opportunities. The coercive bureaucracy is in the spirit of Taylor's (1911) time-and-motion studies, which were invented to identify the single most efficient way of performing tasks. Each deviation of agents who behave opportunistically from the established standards means an efficiency loss and has to be prevented by intensive controls. In enabling bureaucracies rules are designed and implemented as an aid for users. They leave room for reactions to work contingencies. In this logic interruptions of work processes and workers' deviations from rules signal weaknesses of work processes and methods, a need for further worker training and as yet unidentified improvement opportunities. Not only methods engineering departments or industrial engineers but all members of an organization are engaged in ongoing improvements in methods and procedures. Adler and Cole (1993) identify the Japanese "lean production" model as an example of an enabling bureaucracy that promotes individual and organizational learning processes through joint problem-solving by engineers and workers.

Internal transparency describes to what extent workers have insight into the internal functioning of their work system and the rationale of the rules in force. The internal transparency of coercive bureaucracies is low since they only provide lists of flat assertions of duties. Workers are only expected to implement work instructions. Introducing a product development handbook which writes procedures down nicely and neatly without giving any reason for these procedures is an example of coercive organization design. Such a handbook is more of an obstacle to the development of new products than a work aid. In contrast, enabling bureaucracies provide workers with knowledge about the key components of the processes and improve their understanding of the internal logic of the work system so that they can deal more effectively with unexpected problems. Furthermore, examples of best practice routines as well as feedback on actual work performance are provided. If, for instance, a product development handbook contains examples of best practices and ideas on how to do jobs more effectively and efficiently, it becomes a much more helpful working tool.

"**Global transparency** … refers to the intelligibility for employees of the broader system within which they are working" (Adler and Borys, 1996, p. 72-3). In coercive bureaucracies, only supervisors have knowledge about the broader work system. Information given to workers is strictly restricted to the knowledge they need for performing their individual tasks. Thus, global transparency for subordinates is low. Some suggestion systems, for instance, are very opaque to employees since suggestions are only rated as accepted or not accepted. In this case, management completely controls the suggestion system without sharing its knowledge about the functioning of the overall system with workers. In enabling bureaucracies employees are provided with information about the broader system in order to improve their interactions with other parts of the organization and the external environment. In this logic, a suggestion system should also comprise intensive worker training and group discussions with workers in which engineers explain their assessment of suggestions.

In coercive bureaucracies deviations from rules require the superiors' approval. **Flexibility**, thus, is low in order to minimize the organization's reliance on workers' skill and discretion. In such a structure it is impossible, for example, for engineers to skip a step in the product development process just because it is viewed as unnecessary in the individual case. Such a deviation from the rules laid down in the product development handbook has to be authorized by a superior. In contrast, enabling bureaucracies allow deviations from written procedures and view them as learning opportunities. If, for instance, time pressure is high, an enabling product development handbook may allow engineers to skip certain steps in the codified procedure.

The **design processes** of coercive and enabling bureaucracies are different. In coercive organizational environments workers are not involved in the design of procedures at all. Instead, the task of designing the system is allocated to system designers in order to use their specialized knowledge, avoid politics and save the costs of broad participation. The design team starts with clear up-front goals and comes up with a clean final system design which is expected to need no revisions after implementation. In contrast, employee participation is viewed as necessary in the enabling logic. Participation encourages employees' support and improves the results of the design process. Participation is enabled through employee training and the investment of resources. Improvement suggestions by workers on all levels are welcome. The prototyping approach with several successive versions of organizational structures and procedures is used in the design process. All in all, the enabling design process is expected to lead to a greater usability of new organizational systems.

New organizational systems need effective **implementation**. The coercive approach is based on a command and control culture that emphasizes positional authority and top-down control in the implementation process. Employee training focuses on narrow and specialized operational know-how since training is viewed as costly and, thus, should be minimized. The implementation process is autocratic rather than participative. Enabling bureaucracies are implemented in a different way. Training is broader and deeper and embraces know-how as well as know-why. The organization relies on a hierarchy of expertise and shared control instead of positional power and top-down control. The process is more participative and characterized by a collaborative control and learning culture.

To sum up, we can say that Adler's new theory of bureaucracy offers a way of distinguishing good from bad bureaucracies. He is convinced that the enabling type should generally be preferred to coercive systems. Although enabling bureaucracies need considerable investments in training and socialization, Adler (1999; Adler and Cole, 1993) quotes empirical evidence that this form of high-involvement organization is preferable even in mass-production industries with a dominance of cost-

based strategies since it fosters usability of procedures, flexible reactions to unexpected work contingencies, employee motivation and satisfaction, and individual and organizational learning. Thus, the coercive-enabling framework promises to solve the dilemma in quality management between a need for formalized procedures, on the one hand, and participants' complaints about bureaucratic workload on the other.

Two types of quality management systems: Coercive and enabling

As mentioned above, quality management systems show many features of bureaucratic systems. The new theory of bureaucracy teaches that the effectiveness and efficiency of these systems depends on their features, design processes and implementation contexts. Quality management systems, therefore, can be designed in a coercive or in an enabling way.

In a **coercive quality management system** the **autonomy** of participants (farmers, slaughterhouses, processors, retailers and so on) is low. The participants have to follow strict rules in order to prevent shirking and to enable controls by external auditors or the central agency that has organized the system (such as the ISO). The participants are strictly kept out of control routines. Furthermore, **internal transparency** is low in coercive quality management systems. Participants receive only a list of duties without explanations or reasons. **Global transparency** is low except for system designers. As a consequence, these systems are rather **inflexible**. Each deviation from rules has to be approved by the system designers, that is, the central agency, for example, the standardization organization. Participants are excluded from the **design process**. The system is designed in one step in order to avoid costly revisions and guided by clear up-front goals. Training of participants is minimized and restricted to operational know-how in order to save costs. **Implementation** of coercive quality management systems is characterized by a lack of voluntarism. Instead, institutional pressures (Beck and Walgenbach, 2003) or pressures from external stakeholders, such as powerful retailers, force participants into the system.

Enabling quality management systems are designed in a different way. They allow flexible improvisation and customization to different levels of skill and experience. The rules help participants to improve their way of doing business and are viewed as templates to be challenged and improved. Performance standards are accompanied by best practice examples for achieving them. Thus, all-in-all, participants' **autonomy** is much greater in enabling systems than in coercive systems. Moreover, **internal transparency** is high. Participants receive information as to why certain duties are obligatory and what the key elements of the processes are. The goal is to provide participants with knowledge about the internal logic of work processes and reasons for quality standards. The situation is similar concerning **global transparency**. In enabling systems all participants are informed about the broader system they are part of. The goal is to improve interactions in the system by providing insights into the complete work environment. The system is **flexible**. Participants have the opportunity of changing the procedures when this seems reasonable. The **design process** is characterized by participation and step-by-step improvements (prototyping). The enabling **implementation** processes are learning processes in which system designers and participants collaborate. Expertise and knowledge are more important for each participant's role than his or her position in the hierarchy. Participants voluntarily join the system; they are not forced into it. The implementation process includes training in know-how and know-why. Table 3 summarizes the characteristics of coercive and enabling quality management systems.

Paul Adler expects better usability of procedures, improved opportunities for individual and organizational learning, and better motivated and more highly involved system participants in enabling systems. But what do quality management systems in the agrofood sector actually look like? An answer to this question can be provided by analyzing in detail the controversial German *Quality and Safety* (QS) system.

(1) Features of Structure	Coercive quality management system	Enabling quality management system
(a) Participant's autonomy	Low	High
(b) Internal transparency	Low	High
(c) Global transparency	High for system designers, low for participants	High
(d) Flexibility	Low	High
(2) Design process	Designed by experts; one-step approach	Broad participation of system participants; prototyping
(3) Implementation	External pressures dominate the implementation context	Collaborative control and learning culture; know-how and know-why

Table 3. Coercive and enabling quality management systems.

The Quality and Safety system: Coercive or enabling?

The QS system is a reaction of the German agrofood sector to several food crises. It is managed by Quality and Safety, Inc. This organization was founded by German agrofood organizations representing the feed sector, agriculture, slaughtering and deboning, the meat industry and retailing. Quality and Safety, Inc. organizes neutral auditing of system participants, sanctions violations of its rules, has established a pool of accredited auditing institutes and contracts with all system participants. QS has introduced the QS label which is a conformity certificate in accordance with EN 45011.

QS is the first quality management system in Germany outside vertically integrated companies to apply to the whole food chain. It aims at regaining consumer trust in the quality and safety of German and imported food, especially meat and meat products, by reducing failure probabilities and improving traceability. The definition of standards and the subsequent control of the observance of these rules in regular third-party audits are key elements of the QS system, which obviously emulates the Dutch IKB system and other successful foreign blueprints.

Despite its important goals, the QS system is controversial. From the point of view of the new theory of bureaucracy, the controversy surrounding the QS system may be a result of its features, design process and implementation context. Improving the acceptance of the system might require strengthening its enabling features and mitigating its coercive elements. Building on earlier publications on the strengths and weaknesses of the QS system (Theuvsen and Peupert, 2004), it is possible to analyze it with reference to Adler's distinction between different types of formalization (coercive and enabling).

The QS standards are laid down in a handbook for system participants. This handbook defines minimum standards concerning documentation and production processes. In hog production, for instance, these standards affect the tracking and tracing of animals, feed composition and origin, animal health and drug use, hygiene, animal protection, environmental issues, salmonella monitoring and documentation of the inspection results for slaughtered pigs. Despite this detailed list, system participants still have a great deal of **autonomy** in organizing their documentation systems and production processes since the QS System Manual only defines minimum standards and leaves open how to implement the standards. Farmers, thus, can adapt the system to the peculiarities of their own farms. Some parts of the QS System Manual serve as best practice examples. The Manual contains, for example, a suggestion for how to organize required documents, but it also accepts different ways of doing paperwork. What is missing from the point of view of participants' autonomy is a chance for farmers and other participants to systematically contribute to the advancement of the system. Thus, participants' autonomy is restricted to running a system designed without their participation.

The **internal transparency** of the QS system is high where there is a limited degree of specialization, such as on the farm level. Here, the necessity of many regulations, like compulsory participation in a salmonella monitoring program, is obvious and does not need further explanation. Nevertheless, some measures have provoked controversy. The lively discussion concerning the ban on

feeding left-overs, for instance, may indicate a lack of insight into the necessity for this regulation on the part of system participants and may require additional training. Internal transparency is a more severe problem where there is an intensive division of labor, such as in slaughterhouses and meat processing companies. The QS system lays down only very few compulsory training activities. Human resource development is restricted primarily to applicable regulatory requirements stemming from food law. One rare exception to the rule is the obligation to regularly inform employees about the QS Charta which defines the regulations applicable to the different parts of the food chain. Since the necessity of most regulations, like those concerning hygiene and traceability, is obvious for industry insiders, it is excusable that the QS System Manual only provides lists of flat assertions of duties. Nevertheless, it can be hypothesized that there is some room left for the improvement of internal transparency in those parts of the food chain where division of labor is intensive.

Global transparency is fostered by the broad distribution of information via the Internet and traditional communication media so that the details of the QS system are known to all participants. Nevertheless, we can hypothesize that this might not be sufficient in case of intensive division of labor. Here much depends on voluntary employee training in which the necessity and the deeper reasons for the QS regulations are taught. Generally, however, it can be assumed that the open information policy of the central organization (Quality and Safety, Inc.) fosters global transparency since this conveys information about the reasons for certain decisions concerning system design throughout the industry.

The QS system serves as a basis for third-party audits and certifications. Therefore, it is not surprising that the **flexibility** of the system is low. The QS regulations and criteria are defined by a committee called the *Fachbeirat*, which is filled with experts from companies and organizations representing all parts of the food chain. An advisory board (*Kuratorium*) representing a broad spectrum of external stakeholders consults with the QS board of directors and the *Fachbeirat*. Independent changes in the system by participants are impossible except where the system leaves room for autonomous interpretation of regulations.

The **design process** has shown many coercive features. After the foundation of QS, Inc., in 2001, the system goals were defined and a team of experts set up the system. System participants' representatives, such as the German Association of Farmers (*Deutscher Bauernverband*) – but not the individual system participants – were involved in the design process. The design team came up with the final version of the QS system. After launching the system, there were very few revisions, and those were restricted to minor aspects. Although lively discussion about the system design in general and certain regulations in particular did take place, major revisions were rejected. Only powerful stakeholders, that is, retailers, have been able to change the further development of the system. For instance, retailers repeatedly demanded full compatibility with foreign quality management systems, such as the Dutch IKB system. QS, Inc., therefore, intensified its negotiations with foreign quality organizations and subsequently accepted several revisions. Nevertheless, the flexibility of the QS system is very low for the vast majority of participants.

Jahn et al. (2003) found that about one-third of farmers have voluntarily joined the QS system, but the vast majority have been forced into the system by powerful customers, such as slaughterhouses. For the latter this clearly indicates a coercive **implementation** context in which the power of external stakeholders strongly influenced the farmers' decision and the implementation process. Power replaced information, persuasion and intrinsic motivation. But even for participants voluntarily joining the system, collaboration with QS, Inc. is reduced to a minimum. Thus, all in all, implementation processes in the QS system lack enabling features.

Thus, an analysis of the QS system reveals coercive as well as enabling features. The coercive elements in the system might be one important reason for the complaints of German farmers about it. Improving acceptance of the QS system and the involvement of system participants would therefore require the replacement of coercive features by enabling ones. From this point of view, three measures must be given priority. Firstly, participative elements should be strengthened in order to give participants more influence on the further development of the QS system. Food-chain-wide quality circles in which participants share information and experiences and jointly work on improvements are an obvious solution. Secondly, intensified human resource development activities are necessary for improving internal and global transparency. Thirdly, participants should no lonber be forced into the system since this coercive implementation strategy only results in low involvement and reactance. It

should be replaced by a persuasive strategy in which information and intrinsic motivation dominate.

Summary

Referring to the work of Max Weber, it can be shown that quality management systems in general and the QS system in particular are nearly ideal bureaucratic organizations. An efficiency assessment of bureaucratic systems comes up with a somewhat mixed result. On the one hand, the literature on quality management strongly emphasizes the positive aspects of bureaucracies for producing superior quality. On the other, critics stress the loss of flexibility and the undesired standardization in the management of organizations. Organizations, therefore, face a dilemma between increasing bureaucratization in order to attain quality goals, on the one hand, and a need for debureaucratization in order to become more flexible on the other.

Recent developments in the theory of bureaucracy point a way out of this dilemma. Taking different types of bureaucratization into account, Paul Adler distinguishes between coercive and enabling bureaucracies. The latter is a high-involvement organization design which avoids the disadvantages of bureaucracies without sacrificing their strengths. An analysis of the controversial German QS system reveals that it is characterized by coercive as well as enabling features. Strengthening its enabling elements is suggested as a way for countering criticism and fostering the attractiveness of the system.

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