Firms, institutions and management control: the comparative analysis of coordination and control systems

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Abstract

It is becoming increasingly recognized that management accounting and management control procedures and systems vary significantly between organizations, sectors and societies. Four characteristics of control systems, in particular, differ considerably between institutional contexts. These are: the extent to which control is exercised overwhelmingly through formal rules and procedures, the degree of control exercised over how unit activities are carried out, the influence and involvement of unit members in exercising control, and the scope of the information used by the control system in evaluating performance and deciding rewards and sanctions. These four characteristics can be combined to constitute four distinct types of control system: bureaucratic, output, delegated and patriarchal. The relative use of these kinds of control systems—and their effectiveness—reflect major variations in the kinds of organizations and firms that coordinate economic activities through administrative procedures, and their related institutional contexts. The key features of firms here are the diversity of activities coordinated, their rate of change, shareholder lock-in and the degree of owner management. These in turn reflect the nature of the financial system and state structures and policies. Additionally, the ways that skill development is organised in a society and skills are controlled in labour markets affect control techniques and practices, as do the nature of authority and trust relations. Thus, Taylorian control systems are unlikely to be widely used in countries where skill training is highly organised and controlled jointly by employers and unions—as for example in many Central and Northern European states, just as delegated ones are improbable in societies where systemic trust is low and authority patterns are patriarchal. © 1999 Elsevier Science Ltd. All rights reserved.

Much of the traditional literature on management accounting and management control was founded on the belief that economic activities in the developed industrial societies were organized into clearly distinct and well-bounded corporations in which managers coordinated work and sub-units through systematic rules and procedures. The central task of the management control system in these organizations was seen as ensuring that work activities and sub-units fulfilled top managers’ objectives and provided the information and systems to enable the managerial hierarchy to correct any deviations from established plans. In the words of Otley, Broadbent and Berry, 1995, p. 532), management control systems have been understood by many to be “a broad set of control mechanisms designed to assist organizations to regulate themselves” and include both the provision of information about performance and the implementation of corrective actions. In these formulations the nature of the actors and objects involved were typically taken for granted and
regarded as irrelevant to the design of the control system. In particular, variations in: (a) who was doing the controlling, (b) which set of interests they were following, (c) what was the nature of the organizations concerned and, (d) what was being controlled, were usually ignored.

In most cases, the controllers were assumed to be “management”, i.e. the elite group at the apex of an administrative pyramid, who acted in the interests of organizational efficiency, or perhaps effectiveness, as structured by the demands of competitive capitalism. Organizations were taken to be constituted by the legal and financial norms governing corporate forms in Anglo-Saxon capitalism—or sub-units of these—which relied on formal procedures to coordinate work activities “within” them. Such administrative integration and control inside formal organizational boundaries was commonly, if implicitly, contrasted with adversarial, ad hoc and anonymous coordination of economic activities through market contracting outside organizations, as is exemplified by the contrast of “hierarchies” and “markets” in transaction cost economics. Finally, control was usually exercised over task performance and the organizational units responsible for conducting economic activities within formal organizational boundaries. Having structured the formal division of labour following the usual contingencies of size, technology and uncertainty, the managerial control system was intended to monitor the actual activities carried out against planned targets and ensure the necessary corrective action could be implemented. It was, then, typically viewed as the necessary complement to the “rational” organization of work in a firm as decided by the managerial team, and so followed the established notions of rational management and organization.

In the past few decades, this approach has been criticized for being too narrow, for assuming managerial consensus over objectives, for taking worker acquiescence and passivity for granted, and for generating universal—or at least highly general—recipes when it has become increasingly clear that patterns of work organization differ greatly across sectors, regions and countries, as does the nature of firms and economic actors more generally, in ways that have significant consequences for how economic activities are coordinated and controlled (e.g. Otley et al., 1995; cf. Whitley, 1996, 1997). Not only has “Fordism” become transformed into “Post-Fordism”, at least in some authors’ views (see, for example, Boyer, 1991, 1996; Shiomi and Wada, 1996), in ways that affect the operation of control systems, but the very different ways of organizing work and economic activities in general in Japan and other non-Anglo-Saxon societies have become more widely understood among Anglo-Saxon students of management control to the extent that a number of studies relating “culture” budgetary control procedures and related phenomena have been published in the past decade (e.g. Bailes & Assada, 1991; Chow, Shields & Chan, 1991; Chow, Kato & Shields, 1994; Chow, Kato & Merchant, 1996; Merchant, Chow & Wu, 1995; O’Connor, 1995; Ueno & Sekaran, 1991). Unfortunately, many of these tend to posit a rather mechanical connection between dominant norms and values in a society and control practices which ignores the processes by which the former impinge upon the latter.

In the light of the varieties of capitalism which have become institutionalized in the late twentieth century, and the consequent limited role of the “Fordist” mode of economic organization, it is clear that models of management control premised upon the ubiquity and superiority of this form of capitalism need replacing with broader approaches to deal with the considerable differences in systems of economic coordination and control across market economies. In particular, the various forms of “flexible specialization”, alliance capitalism and business group networks highlight the permeability of organizational boundaries and the varied relations between ownership units, administratively coordinated units and more informally linked business groups in different societies (Hamilton, 1991; Langlois & Robertson, 1995; Westney, 1996). Coordination and control of economic activities thus need not, and often do not, occur only within formal bureaucratic hierarchies under common ownership or by “pure” spot market transactions. Management control involves extra-firm linkages and commitments as well as varying degrees of “internal” coordination between organizational units in holding companies

Similarly, the extent to which and ways in which owners, managers and different groups of workers are organized into distinct and separate interest groups varies greatly between market economies, and these differences affect both the division of labour within organizations and the division of organizational labour between them such that the nature of controlling groups and the interests they pursue are significantly different between societies (cf. Kristensen, 1997; Whitley, 1997). Variations in the structure and capabilities of unions and employers’ associations, for example, as well as in the actions of the state, have had significant consequences for the adoption of “scientific management” principles (Lazonick, 1990; Tolliday & Zeitlin, 1991; Guillen, 1994). The study of management control therefore needs to take account of variations in forms of economic organization and interest groups, as well as in the societal institutions and agencies that help to structure them, in order to understand how and why different coordination and control systems become established and widely diffused in different institutional contexts.

As a preliminary contribution to such a comparative analysis of management control, this paper outlines a framework for studying the connections between key characteristics of control systems and how they can be combined to form four distinct types. Second, I consider how these characteristics are related to variations in work organization and types of firms. Third, the key influences which affect the differential development and use of these characteristics across institutional contexts will be discussed, together with their direct linkages to control system characteristics. These concern the organization and control of skilled labour power, financial systems and the state as well as fundamental norms and conventions governing authority and trust relations.

1. Characteristics and types of management control systems

The general characteristics of management control systems which apply at both the work group and organizational levels, and are interconnected with particular kinds of work organization, firm type and associated institutional contexts, can be summarized for comparative purposes in terms of four separate dimensions. First is their degree of formalization, which is perhaps the most common attribute of control systems which is discussed in the literature. This is typically understood in terms of quantified, often financial, indicators and measures and extensive reliance on codified rules and procedures. Often implicitly contrasted with direct personal control over work activities and reliance on personal, ad hoc, diffuse and tacit evaluations of performance, this dimension is, of course, a standard component of bureaucratization indices in comparative organizational analysis which reflects the degree to which formal rules and procedures for coordinating activities and ensuring compliance are generally relied upon in a society. Here, a high degree of reliance on codified rules and procedures implies a strong institutionalization of impersonal regulations governing economic activities and their assessment.

At the work group level, this typically means a preference for written instructions and guidelines about task definition and performance, including the allocation of tasks, the selection of staff, the evaluation of outcomes and the ways that rewards
are allocated. These reduce supervisor discretion and flexibility in favour of general procedures and relatively abstract rules. At the organizational level, formalization refers to reliance on systematic procedures for target setting, performance evaluation and the implementation of corrective actions. Personal and situational idiosyncrasies are disregarded in favour of legalistic adherence to general and relatively abstract rules in controlling subunit activities.

Conversely, a low reliance on formal rules and procedures implies greater personal discretion and a tendency to take more features of the specific situation into account in monitoring and evaluating performance. Here, formal rules may well exist and be used, but idiosyncrasies of the people involved and the particular situation are often seen as being at least as important as the written procedure. Standard setting, performance monitoring and evaluation, and subsequent actions are not dominated by formal procedures remote from the specific circumstances and relationships involved.

As a key indicator of bureaucratization of coordination and control systems, the degree of formalization of control practices is often allied to the second characteristic considered here, the extent to which individual group and organizational unit behaviour is tightly prescribed and controlled. This control can, of course, be exercised either formally or informally, or both, and the existence of formal rules and procedures about task or unit performance need not imply highly detailed monitoring of actual work processes. While scientific management prescriptions implied both a heavy dependence on formal procedures for monitoring and controlling work with precise, detailed instructions for carrying it out, many formal measures of outputs do not specify how tasks are to be conducted, or, in some areas of professional work, what the nature of the tasks is to be. Equally, a preference for informal and personal control over economic activities need not preclude extensive supervision of work processes and strong centralization of control over unit activities, as in patriarchal work systems (Redding, 1990; Silin, 1976; Whitley, 1992a, 1997).

A third dimension of management control systems which is often compared across organizations from different cultures is the extent of employee or subunit involvement in target setting, monitoring and evaluation of performance (e.g. Bailes & Assada, 1991; O’Connor, 1995). While this would normally be associated negatively with the extent of tight control over subordinate behaviour in that low discretion control systems are unlikely to encourage much employee involvement, it does help to distinguish two types of control system where detailed prescriptions of task performance are rather limited and open ended. Especially in countries with strong skill based unions and an effective, widely accepted training system, delegation of control over the nature of work processes, and how performance is to be monitored and evaluated, to skilled workers may be quite considerable in some industries (Kristensen, 1992, 1997). In contrast, output-based control systems in, say Anglo-saxon and Japanese societies may leave specific details of task performance to the discretion of individuals and groups while in practice deciding performance standards and indicators quite centrally.

Finally, the scope and immediacy of feedback and control mechanism vary considerably between daily piecework based reward systems and more long term career structures. While these typically differ between hierarchical levels in organizations and between activities of differing complexity and uncertainty, they also reflect more general features of employment systems, labour markets and financial systems. The stereotypical U.S. corporation, for example, tends to focus on relatively short term and narrowly specific indicators of performance in making career decisions and allocating rewards whereas many large Japanese companies evaluate blue and white collar staff over a number of years and in a number of roles. They also tend to take more aspects of work performance into account than simple, highly codified measures of results, especially overall contribution and commitment (Aoki, 1988; Dore, 1973, pp. 110–113; Inohara, 1990; Rohlen, 1974). This aspect can be termed the scope of the control system and the information it relies upon.

These four characteristics of control systems apply at both the individual/work group level and the organizational subunit level. Other aspects,
such as the relative importance of group or individual performance and the extent to which the interaction of subunits is systematically coordinated and controlled, are often applicable more to one of these levels than the other. In terms of characterising distinctive kinds of control systems, they can be combined into a wide variety of types—although not all combinations are empirically likely as indicated above. However, four major kinds which seem to occur quite frequently can readily be distinguished. These can be termed the bureaucratic, the output, the delegated, and the patriarchal, which do, of course, have a number of subtypes. Their key characteristics are summarized in Table 1.

Bureaucratic control systems have been extensively discussed in the organizational literature and typically combine high levels of formalization and reliance on written rules and procedures with detailed instructions about how tasks and activities are to be performed, as in “scientific management”. Such systematic and specific prescriptions tend not to encourage subunit participation in target setting and performance evaluation so that this kind of control system is essentially a top down one. Equally, it tends to focus on highly specific information and performance indicators derived from formal procedures and so is relatively narrow in scope.

Output based control systems have been contrasted with bureaucratic ones in terms of their much lower specification of how activities are to be carried out. While subunits may be more involved in setting performance standards and monitoring outputs than in bureaucratic control systems, this is unlikely to be very significant except under conditions of strong collective organization and high employer dependence on subordinate commitment. Relying extensively on financial measures of performance to control activities implies a lack of knowledge about how they are performed and consequently rather limited ability to assess technical competence and the potential for improving work processes. Under these circumstances it seems unlikely that managers will be willing to delegate substantial influence over standard setting and performance monitoring to subordinate units. Finally, of course, this sort of control system is narrow in its scope by definition.

Delegated control systems, in contrast, grant considerable autonomy to subordinate groups and units over work performances and may also involve them in standard setting and monitoring. Where organizations are fairly small and specialized, control tends to be fairly informal and direct, but more systematic procedures can be expected to be established in larger ones, albeit over longer time periods and more collectively focused than in output control systems. Project-based organizations in professional service industries, for example, often rely on fairly long term and broad formal indicators of performance as complements to high levels of skill development and “professional” commitments to job performance. In both “artisanal” and “project” or “professional” types of delegated control systems, evaluation relies on broad indicators of competence and contribution, often over years rather than days, and presumes both high levels of technical expertise among employees and of their commitment to maintaining it, as in Denmark (Kristensen, 1992, 1997).

Patriarchal control systems are characterized by much more personal and informal relations

<table>
<thead>
<tr>
<th>Characteristics of control systems</th>
<th>Bureaucratic</th>
<th>Output</th>
<th>Delegated</th>
<th>Patriarchal</th>
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<tbody>
<tr>
<td>Extent of reliance on formal rules and procedures</td>
<td>High</td>
<td>High</td>
<td>Mixed</td>
<td>Low</td>
</tr>
<tr>
<td>Extent of control over how economic activities are to be carried out</td>
<td>High</td>
<td>Low</td>
<td>Low</td>
<td>High</td>
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<tr>
<td>Involvement and influence of subordinates in control system</td>
<td>Low</td>
<td>Limited</td>
<td>Medium</td>
<td>Low</td>
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<tr>
<td>Scope of control system</td>
<td>Limited</td>
<td>Low</td>
<td>High</td>
<td>Considerable</td>
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</table>
between controllers and controlled, with comparatively little reliance on written rules and procedures. This need not, of course, mean that these do not exist but rather that managers, especially the owner–manager at the top, prefer to rely on direct supervision and personal contacts in monitoring and controlling subunit activities, and retain considerable personal discretion in making decisions, bypassing established routines and channels, as in many Chinese family businesses (Redding, 1990; Silin, 1976). Typically, these sorts of control systems grant little discretion to subordinates over task performance, nor do they involve them much in standard setting or monitoring. They tend to be highly centralized and associated with considerable direction over work processes, as in many Korean firms (Janelli, 1993).

This type of control system is, of course, strongly connected to particular kinds of authority relations, broadly summarized as paternalist, that are widely institutionalized in many industrializing societies. These subordination relations presume an inequality in status and competence, and sometimes morality, between supervisor and supervised such that the former takes responsibility for the interests of the latter (Beetham, 1991). Such control systems involve broad and diffuse indicators of performance and commitment where personal connections are involved, but it should be borne in mind that many employees in such organizations are often relatively unskilled and work for only a short time there, especially female ones in labour intensive industries. Control over work processes in such cases is usually highly specific and short term (Deyo, 1989).

2. Control systems, work organization and firm type

These different kinds of management control systems and their characteristics are clearly connected to different ways of organizing work and managing employees, and to variations in the kinds of enterprises that implement them. Bureaucratic control systems, for example, tend to be associated with quite rigid and specialized divisions of tasks which are usually decided by senior managers who have considerable discretion over how work is to be organized. At least in the pure scientific management model, supervisor–subordinate relations are typically remote and distant since the latter are relatively unskilled and merely required to carry out formal instructions. For similar reasons, organizations that establish these kinds of control systems do not rely on the initiative and commitment of their workforce and have few, if any, commitments to their continued employment. Labour management in these firms is typically short term and heavily reliant on external labour markets. Such control systems are usually developed in large companies which are often vertically integrated and not highly diversified across industrial sectors since this would limit the ability of top managers to control how economic activities were to be carried out.

As this example indicates, the adoption of particular control systems reflects general managerial choices about work organization and labour management policies, as well as the nature of the managerial elite itself, its relations to major owners and lenders, and its dependence on the success of individual enterprises and industries as distinct from its identification with managerial expertise and “managers” in general (cf. Stewart, Barsout, Kieser, Ganter & Wulgenbach, 1994). Management control systems are particularly closely connected to the prevalent division of labour, task allocation and coordination and the sorts of employment strategies followed by firms. Three aspects of these broad features of work organization are particularly important for control system characteristics. First, the fragmentation and rigidity of task definitions and allocation. Second, the extent to which coordination of work is exclusively hierarchical or relies on some horizontal integration between work stations by employees. Third, the willingness of managers to rely on the skills and commitment of their core manual and white-collar workforce in developing competitive organizational capabilities, and their corresponding commitment to retaining them over business cycle fluctuations.

Turning now to consider more general features of firms and organizations, in addition to the overall size of a firm being closely related to the tendency to formalize control procedures—which
itself depends on broader institutional norms dealing with trust and authority as the Korean chaebol demonstrate (Janeli, 1993; Kim, 1992; Steers, Shin & Ungson, 1989)—there are at least four further ones connected to control system characteristics. These concern the variety and rate of change of their basic activities and capabilities and the nature of owner–manager relations, commitment and risk sharing.

First, the diversity of economic activities coordinated by ownership units differs significantly between business systems and affects the choice of feasible control systems. Second, the extent to which firms alter their basic capabilities and activities by, for example, readily buying or selling subsidiaries varies greatly between, say, Japan, Taiwan and the U.S.A. (Fligstein, 1990; Hollingsworth, 1991; Whitley, 1992a). Third, shareholders and bankers vary considerably in the degree to which they—and top managers—are effectively locked-in to the destinies of particular enterprises such that they cannot easily “exit” from customers. Such lock-in increases risk bearing and sharing between investors and managers, and clearly encourages closer coordination and control of firms’ activities. Finally, the extent of direct owner control of managerial decisions and involvement in day to day activities usually has quite strong connections with how they control them, especially in institutional contexts which trust in formal procedures is low and authority relations are more paternalist rather than contractarian. Typically, the combination of low trust cultures and paternalist political systems encourages direct owner control and the use of patriarchal control systems (Fukuyama, 1995). Conversely, delegated control systems are often associated with much broader job specifications and more flexible use of skills, closer ties between supervisors and subordinates based on common expertise and training and greater employer reliance on maintaining a highly skilled workforce and commitment to high task performance. They tend to be used by firms that are not highly diversified or liable to radically change their basic technologies or markets and that are able to share some of the risks of remaining in single or related sectors with shareholders and banks.

These sorts of general connections can be further differentiated by considering the four characteristics of control systems outlined above in relation to a number of key characteristics of organizations before analyzing how these are all related to specific features of their institutional environments. Considering first the connections between control system characteristics and patterns of work organization, two major ones deal with the division of labour and coordination mechanisms. As summarized in Table 2, a fragmented and rigid division of tasks and roles is typically associated with a high reliance on formal rules and procedures and extensive prescription of

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<tr>
<th>Control system characteristics</th>
<th>Reliance on formal rules</th>
<th>Close control over behaviour</th>
<th>Influence of subordinates</th>
<th>Scope</th>
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<tr>
<td>Work organization</td>
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<tr>
<td>Fragmentation of tasks</td>
<td>+</td>
<td>+</td>
<td>–</td>
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<tr>
<td>Hierarchical coordination of activities</td>
<td>+</td>
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<td>–</td>
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<tr>
<td>Dependence on employee skills and commitment</td>
<td>–</td>
<td></td>
<td>+</td>
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<td>Firm type</td>
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<td>Size</td>
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<td>Diversity of activities coordi...</td>
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<tr>
<td>Discontinuous change in activities</td>
<td>–</td>
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<td>Major shareholder/bank lock-in</td>
<td>–</td>
<td></td>
<td>+</td>
<td>+</td>
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<tr>
<td>Owner control</td>
<td>–</td>
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how tasks are to be done because tasks are simple and routine and can be largely specified by written instructions. Clearly subordinates are unlikely to be involved in the operation of the control system in this situation and performance is fairly narrowly monitored and evaluated. Hierarchical coordination of work activities may be carried out either by formal rules or through more personal means, but typically it implies close supervision of work processes in order to ensure they are effectively integrated where horizontal connections are not encouraged. Again, subordinate involvement in the setting of standards is not common here, but the scope of the control system could be either narrow or broad depending on authority relationships.

Focusing next on the connection between control systems and labour management strategies, it seems likely that the more managers depend on employees’ skills and long term contribution, the less likely they are to prescribe how work should be done and the more they will involve subordinates in the operation of the control system, especially where workers are strongly organized. Similarly, high levels of employer–employee interdependence will encourage managers to be more concerned with broad assessments of individuals’ and groups’ contributions than narrow performance indicators.

Turning to the relations between control system characteristics and overall firm and organizational features, the most commonly noted one is that between size and formalization. This is, though, affected by skill levels and uncertainty, as well as broader cultural conventions. Size, per se, does not seem to be directly linked to the other three characteristics considered here. Diversity of activities and capabilities, however, has wider implications. Where firms are engaged in quite diverse industries, they will find it difficult to prescribe how different subunits are supposed to carry out their activities given their relative lack of knowledge of widely differing technologies and markets. Reliance on general, often financial, indicators is therefore more likely here than when diversification is limited. However, because information from different subsidiaries is limited in its detail, it seems improbable that top managers will delegate much influence over target setting and performance monitoring to subunits—although, of course, they may not do so either in less diversified firms. The operation of the control system, then, is likely to remain quite centralized in multi-sector enterprises. For similar reasons, the scope of control systems is quite narrow in these kinds of firms given the lack of detailed information that can be standardized in evaluating specific performance contributions across widely differing technologies and markets. Anglo-saxon conglomerates thus typically rely heavily on highly formalized financial control systems (Horowitz, 1980).

Third, firms which undergo radical discontinuities in the nature of the activities they engage in and of their organizational capabilities are also more likely to rely on general financial indicators of performance than engage in systemic monitoring of detailed behaviours and decisions. Similarly, they are unlikely to delegate much influence to subsidiary managers over how the control system operates given the considerable de facto decentralization of operational decisions and the lack of attachment between the unit of ownership coordination and the separate operating organizations. Where ownership is readily tradeable so that the organizational competences of firms can change quite radically as businesses are bought and sold in an active market for corporate control, commitment between top owners–managers and subsidiary managers will not be high and so controls are more likely to be imposed from the top than be negotiated between managerial colleagues. The lack of stability in technologies and markets will also reduce the likelihood of using long term, broad indicators of performance in favour of narrowly focused control systems, as many large Anglo-Saxon diversified companies demonstrate.

On the other hand, where, fourth, major shareholders and creditors are locked into the fate of individual enterprises and cannot easily “exit” from their commitments, but are not directly involved in management, they are likely to insist on both formal procedures governing major decisions and frequent flows of both formal and informal information to manage the greater risks involved. In general, the discretion of top man-
agers over strategic choices will be less than in situations where owners are easily able to sell their shares on a liquid secondary capital market because the interdependence between financing institutions and firms is greater and is more likely to be controlled through systematic written rules. This, in turn, will encourage a greater reliance on formal procedures within enterprises as managers seek to ensure their control in a corresponding manner. It need not mean, though, that such rules prescribe how operations are to be managed, nor does it rule out mutual determination of how the control system will operate, given the relatively long term and interdependent nature of the relationship.

It will, however, encourage a more elaborate and wide-ranging control system being developed in most firms as planning and control of economic activities can be more long term and assume a greater degree of risk sharing between investors and managers. This interdependence does, of course, itself lead to greater concern with detailed target setting and evaluation of opportunities and outcomes over longer periods as managers and bankers are committed both to each other and to particular industries. Because they cannot readily exit from a particular firm or industry, they will want to be well informed about firms’ activities and performance to manage the greater risks involved than if they could simply sell their shares or move elsewhere. The prevalent pattern of alliance capitalism in Germany and Japan manifest these sorts of connections (Gerlach, 1992; Lane, 1992).

Where owners directly control enterprises, in contrast, they will prefer to retain considerable discretion over decisions and are unlikely to wish to be subjected to the constrains of formal rules and procedures. They are more likely, though, to exercise strong control over subunit performance and to supervise directly subordinate activities, especially in societies where the level of trust in formal institutions is low and subordinate commitment to organizational goals difficult to ensure, as in many Chinese family businesses (Silin, 1976; Redding, 1990). Although affected by skill levels and the collective organization of employees, owner managers will retain considerable influence over how control systems operate and are also likely to rely on a wide variety of information in seeking to control subunits. Given their general unwillingness to delegate control and rely on indirect sources of information, control systems in such firms are unlikely to be narrowly focused.

3. Control systems, firms and societal institutions

These connections, and the nature of firms and markets more generally, are also linked to broader features of the socio-economic context in which economic activities are embedded. In particular, the cultural conventions governing trust and authority relationships in a society, the nature of the financial system and state–society relations, and the ways that skills are developed, certified and controlled all affect the division of labour within organizations, the division of economic coordination between organizations and firms and the ways that ownership is organized and related to management (Whitley, 1992b, 1997). Some of these phenomena also directly influence control system variables, such as the dependence of formal control procedures on more general adherence to formal rules and procedures governing subordination relations and contractual compliance. In comparing variations in control systems, then, these societal features are of critical importance.

At least six major features of organizations’ institutional contexts are likely to affect directly the sorts of control systems they develop. These are listed in Table 3 with their links to particular characteristics of control systems. First of all, two sorts of broad cultural conventions governing social relationships are important for the coordination and control of economic activities: trust and authority norms. As has been emphasized in a number of recent discussions, the ways in which, and extent to which, societies generate trust between business partners in economic transactions are crucial to how industrial capitalism develops and the forms it takes (e.g. Zucker, 1986; North, 1990; Sako, 1992; Fukuyama, 1995; Lane & Bachmann, 1996). In particular, the extent to which economic actors feel able to rely on formal procedures and institutions in making
commitments to business partners and ensuring their competence—as distinct from relying on direct personal knowledge or recommendations—affects their willingness to delegate control to intermediaries and rely on procedural measures to control their behaviour. This, in turn, of course influences their ability to establish large organizations controlling complex technologies and developing distinctive organizational capabilities.

Relatedly, authority relationships vary greatly in their reliance on formal rules and procedures and their recognition of subordinates as formally equal parties to employment agreements. Predominantly paternalist patterns of subordination, for instance, treat employees as being in the care of superiors who are supposed to act in their best interests given the limited capacity of subordinates to do so (Beetham, 1991, pp. 88–90). In contrast, more contractarian norms of authority treat both superior and subordinate as being, in principle, equal citizens and freely able to enter into contracts on the basis of their own equally valid perception of their best interests.

Where both trust in formal institutions and procedures is low and authority relations are more paternalist than contractarian, as in many non-Western societies, control systems are likely to rely more on personal supervision than on formal procedures and to grant superiors considerable discretion in their operation. Subordinates will be tightly monitored and controlled since, in general, trust in their competence and commitment is unlikely to be high, except for those who have won the personal commitment of the owner manager. Similarly, subordinates will have little influence on the way the control system operates and the evaluation of their performance will be wide-ranging and involve a considerable variety of indicators, including personal ones.

While state structures and policies in general have considerable influence over the sorts of firms and markets that develop in a particular society, and the ways they organize work systems (Whitley, 1996, 1997), there are two particularly important features which directly impinge upon the control system characteristics discussed here. These are: (a) the extent of business dependence on the state and, (b) the degree to which economic activities and coordination are formally organized through the legal system and state regulations. Business dependence on the state reflects the extent of state dominance of civil society, on the one hand, and its involvement in managing economic activities and sharing investment risks, on

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<th>Institutional features</th>
<th>Control system characteristics</th>
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<tr>
<td></td>
<td>Reliance on formal rules</td>
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<td>Cultural conventions</td>
<td>Low Trust in formal institutions and procedures</td>
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<td>State structures and policies</td>
<td>Business dependence on the state and economic coordination</td>
</tr>
<tr>
<td></td>
<td>Extent of formal regulation of markets and economic coordination</td>
</tr>
<tr>
<td>Skill development and control</td>
<td>Strength of public training system and of employer-union collaboration</td>
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<td></td>
<td>Strength of unions and of horizontal interest groups in general</td>
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</table>
the other hand. In both South Korea and Taiwan, for instance, the state has been dominant since the end of the Second World War, with little if any alternative sources of collective mobilization and influence, but the Taiwanese state has largely remained aloof from the privately owned export oriented sector while the Korean state has been extensively involved in directing investment and controlling industry entry and exit (Jones & Sakong, 1980; Gold, 1986; Wade, 1990; Woo, 1991). For most Taiwanese SMEs in the export trade—and most exporters in Taiwan remain relatively small in size—their dependence on the state is, then, lower than it is for their counterparts—who are much larger as a result of state policies—in Korea (Levy, 1991; Fields, 1995).

Where business dependence on the state is as high as it is in Korea, such that political risk is as great, if not greater than market risk, firms are likely to be highly centralized and to exert considerable control over the behaviour of subunits. Correlatively, subordinate influence on target setting and performance monitoring is quite weak, not least because these are often determined by state agencies in highly state dependent businesses. Overall, then, strong state involvement in the economy and in firms’ strategic choices is likely to encourage the use of top-down, prescriptive control systems where countervailing influences are weak and poorly organized.

States also vary greatly in the extent to which they directly or indirectly regulate markets and industry structure through formal rules and procedures, as well as through various corporatist mechanisms. Anglo-Saxon capitalism by and large engage in little such formal regulation, while many central European and Scandinavian states have elaborate licensing rules and encourage trade associations and similar collective bodies to organize industry development. The more such formal regulation—which need not imply strong state direction—of economic activities exists in a society, the more we could expect firms to institutionalize formal control systems in their own organizations as they adapt to and imitate key features of their environments.

Turning to consider the skill development and control system, the ways that practical skills are acquired, certified and organized have been shown, principally by the Aix group and their colleagues (Maurice, Sorge & Warner, 1980; Maurice, Sellier & Silvestre, 1986), to have important connections to different patterns of work organization and authority structures in Europe. Relatedly, the ways that unions are organized, and the extent of their influence, affect managers’ ability to structure the division of labour and authority in organizations as well as the way in which they control work processes (Kristensen, 1992, 1994, 1997; Whitley, 1997). While some U.S. firms sought to destroy craft workers’ control over production in the engineering industry—successfully according to Herrigel (1993, 1994)—allied to the development of mass production strategies, in some European countries the unions were able to prevent such “rationalization” (Sorge & Maurice, 1993) and, in Denmark at least, have maintained substantial craft control over skill development and allocation (Kristensen, 1997).

The specific features of the labour system in various countries which directly impinge upon control systems can be summarized as two dimensions: (a) the overall strength of the public training system and the extent of union–employer collaboration in its operation, and, (b) the collective strength of the unions and of horizontal interest groups—such as professional associations—in general. The public training system can be considered to be strong when it develops standardized skills that are well regarded by both employees and employers, and are crucial for entering a wide range of labour markets, including those for non-manual work, as in, say, Germany (Lane, 1989). Union strength refers to membership density, organizational cohesion and political influence as well as the ability to affect workplace relations. Horizontal interest groups—especially those based on certified expertise—are important influences on organizations because they affect the discretion of firms to structure the division of labour and control work definition and evaluation (Child, Fores, Glover & Lawrence, 1983; Kristensen, 1994; Botti, 1995).

Where the public training system is both strong and involves employers and unions collaborating in its management with the state, it produces skills
that are relatively highly valued by trainees—and so attracts high quality applicants—and by employers—and so encourages firms to trust the competence of skilled workers. It also provides the basis for union–employer cooperation in other spheres. In such societies it seems more likely that managers will be less concerned to exercise tight control over employee behaviour and will also be more willing to allow some employee role in the operation of the control system, especially if they are themselves dependent on the fortunes of particular firms and industries (Whitley, 1997), than where the training system is weak and union–employer relations adversarial.

Relatedly, strong unions, and horizontal interest groups in general, will limit the ability of managers to impose tight controls over worker behaviour and also encourage them to share some influence over standard setting and performance evaluation. This is particularly probable when skills are highly regarded by employers and there are limits on their ability to deskill work processes. Thus, “bureaucratic” control systems are less likely to be widely introduced, or to prove effective, in societies where both the training system and the unions are strong, relative to more “delegated” ones.

These connections between control system characteristics and dominant societal institutions can be combined with those between firm characteristics and control systems to develop some tentative suggestions about the conditions in which the four types of control system identified earlier are likely, or not, to become widespread in particular sorts of firms in different societal contexts. Since firms vary systematically in their diversity, flexibility and ownership relations between market economies because of these institutional variations (Whitley & Kristensen, 1996), the actual number of possible combinations of these characteristics likely to become institutionalized in capitalist societies is more limited than might at first be thought.

These interconnections mean that control systems which are more likely to be effective in a particular kind of firm will often also tend to be used in certain institutional contexts which encourage those sorts of firms and their associated control systems to develop. The impact of firm type and institutional features on the implementation of particular control systems is thus combined. This is especially significant when these features discourage the adoption of one of these types. As Table 4 suggests, for instance, low trust in formal institutions and procedures inhibits reliance on bureaucratic control systems because of the perceived unreliability of written rules. It also, though, encourages strong owner control and thus additionally makes it unlikely that full scale bureaucratic systems will be relied upon in such societies.

Table 4
Connections between control system type, firm characteristics and societal institutions

<table>
<thead>
<tr>
<th>Control system type</th>
<th>Bureaucratic</th>
<th>Output</th>
<th>Delegated</th>
<th>Patriarchal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Firm characteristics</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High diversity of activities</td>
<td>–</td>
<td>+</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Discontinuous change</td>
<td>–</td>
<td>+</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Shareholder/bank lock-in</td>
<td>–</td>
<td>+</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Owner control</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>+</td>
</tr>
<tr>
<td>Size</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Societal institutions</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low trust in formal institutions</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>+</td>
</tr>
<tr>
<td>Paternalist authority relations</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>+</td>
</tr>
<tr>
<td>High business dependence on the state</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>+</td>
</tr>
<tr>
<td>Strong formal regulation</td>
<td>+</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Strong public training system</td>
<td>–</td>
<td>+</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Strong unions</td>
<td>–</td>
<td>+</td>
<td>–</td>
<td>–</td>
</tr>
</tbody>
</table>
As Table 4 indicates, it is easier to suggest negative connections between particular characteristics of firms and institutions in a society and the likelihood of managers adopting different kinds of control system than to be clear about the conditions in which, say, bureaucratic ones will be widespread. This is because the number of factors which can inhibit or limit the use of any one of the four characteristics which constitutes a control system is considerable, and the institutionalization of one of these four idealized systems usually requires a combination of features which may occur infrequently. It should also be noted that many of these connections are based on relatively extreme values of characteristics and often they are not reversible. While, for example, diversified conglomerates rarely impose fully bureaucratic control systems on their subsidiaries because of the difficulty of monitoring and prescribing behaviours in quite different industries, it does not follow that more focused enterprises tend to implement such systems since this would depend on other conditions, such as trust and authority patterns and the nature of the labour system.

Considering next the conditions in which these four types of control systems are likely to become widely established in a society, the widespread implementation of highly bureaucratic control systems combining formalized rules and procedures with detailed control over work behaviour, task fragmentation, etc. as in scientific management prescriptions is limited to a small number of firms and societies, as indeed the wholehearted adoption of “Taylorism” and “Fordism” has proved (Boyer, 1991, 1994; Guillen, 1994; Shiomi & Wada, 1996). It is only feasible as a reliable means of controlling work and employees in societies which combine: (a) a widespread acceptance of formal rules and procedures for regulating economic behaviour and subordination relations, (b) markets which are mostly organized around impersonal and formal regulations, (c) weak unions, (d) an ineffective public training system, (e) low levels of owner control, and hence considerable managerial autonomy, and, finally, limited diversification and change of activities amongst leading firms.

Vertically integrated mass production enterprises which dominate their markets in legalistic, capital market based, business dominated societies are, perhaps, the only ones where such control systems could be effectively adopted, as in some sectors of U.S. industry in parts of the twentieth century (Lazonick 1990; Campbell, Hollingsworth & Lindbergh, 1991). Elsewhere, formal controls are supplemented by more personal ties and superiors are not so constrained by rules and procedures and/or the extent of control over the work process is much less, with more discretion being granted to subordinates.

Output control systems also require an ability to rely on formal rules and procedures to control task performance, but much less prescription over how they are carried out. They therefore are used in societies with effective legal and contracting systems where authority is more contractual than paternalist, and with varying types of labour system—unless a strong union movement limits radical changes in organizational activities and capabilities. Diversified, rapidly changing firms are more likely to rely on them, unless they are owner managed. Thus, many holding companies that move in and out of industries fairly quickly—which in turn usually implies a liquid market for corporate control for buying and selling businesses—rely on such control systems, especially in capital market based financial systems with well established financial and legal intermediaries.

Delegated control systems, on the other hand, are encouraged by a strong public training system and strong unions, as well as shareholder/bank risk sharing as in many credit based financial systems (Zysman, 1983; Cox, 1986). Essentially, they involve managers sharing risks with core employees and so are more likely to be adopted when risk sharing between different groups and organizations is more institutionalized through mutual lock-ins and strong social conventions encouraging cooperation rather than adversarial competition. The more managers and skilled workers come to believe they share a common dependence on the success of particular enterprises and industries, the easier it will be to implement delegated control systems. Corporatist societies with limited managerial mobility, some bank risk sharing and highly effective training systems are therefore more likely to institutionalize these kinds of control.
systems, than those with dominant capital markets, “efficient” external labour markets and remote, adversarial relations between state agencies, employers and unions, especially where firms are not highly diversified. Scandinavian and Central European countries seem to have developed these kinds of control systems more widely than Anglo-Saxon ones or those, such as France, where the state retains considerable control over leading sectors of the economy, unions are weak and owner control is extensive (Lane, 1989; Kristensen, 1997; Lilja, 1997).

Finally, patriarchal control systems are prevalent in societies where trust in formal rules and procedures is low, authority is typically paternalist and business dependence on the state—and the overall centralization of the economy—is high. Relatedly, owner control over firms tends to be high and both the public training system and unions are relatively weak. Because of the weakness and perceived unreliability of formal institutions personal trust is more significant than “systemic trust” (Luhmann, 1988) and this limits the size of complex organizations integrating varied skills and capabilities since delegation of control through formal procedures is restricted. When formal controls do exist in such situations, they are typically combined with, if not dominated by, informal obligations and commitments, and rarely constrain the behaviour of superiors, especially the owning family.

4. Conclusions and implications

This brief discussion of some connections between management control systems types of firms and institutional contexts highlights their variability across firms, sectors and societies, and suggests some reasons for these differences. Essentially, control system characteristics are seen here as being closely linked to broader patterns of work organisation and labour management strategies, as well as to variations in the nature of firms and the logic underlying their strategic decisions. These phenomena in turn reflect the societal contexts in which economic activities are carried out, some features of which also directly affect the effectiveness of control system types. Thus, the ways that managers of different kinds try to control and coordinate the behaviour and performance of organizational units are greatly interdependent with the sorts of firms and organizations they are members of and the nature of the political, financial, labour and cultural systems they are embedded within. This approach suggests three general implications for the comparative analysis of management control systems and management accounting practices.

First, just as task uncertainty, employee skill levels and environmental instability are widely considered to affect the efficacy of bureaucratic, output and normative control systems in the organizational literature, so too do broader features of organizations and their contexts. Indeed, many of these “contingencies” are themselves interdependent with societal institutions such as trust and authority relations, labour systems and the role of the state. For example, the management of large organizations relying on technologically advanced and complex production processes often requires considerable delegation of responsibility to, and motivation of, highly trained technical staff which may be difficult to achieve in societies where trust in formal institutions and relations is low. Not only, then, do control system characteristics vary between organizations of different kinds and in different sectors, as well as between different sorts of departments and hierarchical levels, but they also vary significantly between types of firms and societal contexts such that we would not expect any single mode of ensuring control of economic activities to be generally applicable across such contexts. This is not only because, say, the nature of financial systems affects the development of mutual dependence between managers and employees and prevalent standards of economic performance in an economy, but also because it influences the sorts of firms that come to dominate that economy and the ways they manage risks.

Anglo-Saxon capital market based financial systems, for instance, encourage a greater concentration on standardized financial measures of performance, diversified, changeable firms and limited managerial dependence on a single firm or
sector, than does, say, the bank dominated one in postwar Japan. Such standardized and abstract measures in turn limit the development of highly detailed prescriptions of unit behaviour, long term, broadly based control systems and the involvement of subordinates (Clark, 1979; Stewart et al., 1994; Whitley, 1996, 1997). This is not to say that in some firms and sectors these control system characteristics may not occur but that overall they will not become dominant ones in such economies.

This interdependence implies that the development and use of particular management accounting procedures and practices by managerial groups in different firms, sectors and societies reflect significant variations in the nature of these groups and firms, and their wider institutional contexts. An important focus of management accounting research, then, concerns how managerial elites of various sorts in different kinds of organizations, firms and societies come to rely on particular management accounting practices, and the consequences of these variations for managerial decision making and outcomes.

Second, the implementation and operation of management control systems reflect a variety of interests and capabilities which often conflict and change over time. Comparative studies of the machine tool industry in Britain, France, and Germany have shown that the ways in which managers control work processes are closely connected to: (a) product market strategies and changes in these, (b) how they perceive their interests in contrast to those of the skilled workforce, and, (c) their ability to mobilise resources to achieve what they want in the face of union, and sometimes state, resistance (Sorge & Maurice, 1983; Piore & Sabel, 1984; Herrigel 1994). As Lazonick (1990, 1991) has suggested, the managerial desire to remove skills from the shopfloor to managers and engineers in the U.S.A. was significantly influenced by the ability of craft workers to control output and thereby limit the profitability of the new technologies of mass production. Tight bureaucratic control was thus a response to adversarial labour relations where strong craft unions prevented—or threatened to prevent—the introduction of new production processes.

Elsewhere, and especially in parts of continental Europe, firms were not so intent upon replacing manual skills with capital intensive machinery and craft workers were able to continue to play a significant part in controlling work processes, partly because of their relatively low wages and, in Britain at least, partly because of the unwillingness of many employers to invest in the personnel and procedures which would enable them to take direct control of work processes. Control system characteristics thus reflect competition and conflict between various interest groups in the workplace, and change when their nature and power alter.

This emphasises the contestable and contextual nature of management accounting practices which reflect and help to reproduce this competition and conflict between variously constituted and powerful interest groups. The sorts of accounting procedures and practices that are developed, and how they are applied and interpreted, in different circumstances are affected by the composition, priorities and resources of owners, managers, and labour representatives, and by the prevalent rules of the game governing their competition and cooperation. Changes in the nature of these groups and their institutional contexts can be expected to result in changes in accounting systems and how the information they generate is used by various groups and linked to organizational change, as can be seen in the processes of organizational restructuring in many of the former state socialist societies of Eastern Europe (see, for example, Clark & Soulsby, 1995; Konecki & Kulpinska, 1995; Nilsson, 1996).

Third, in seeking to understand why—or to what extent—control systems vary across societies, it is important to explore the nature of the processes connecting societal institutions, the constitution and behaviour of interest groups, and the sorts of firms that coordinate economic activities. To search for direct correlations between, say, “cultural” predispositions as identified by survey questions and organizational control system characteristics in isolation from these mediating and interconnected phenomena is to risk drawing rather superficial and misleading conclusions. In particular, it is important to be aware how specific circumstances can affect the sorts of tendencies
suggested in Table 4. In any particular organization, sector or society, their use is mediated by other factors which can severely inhibit their general occurrence.

Predominantly paternalist authority patterns in postwar Japan, for example, have not prevented some involvement of middle managers in decision making and of manual workers in problem solving in many large Japanese firms, because of much greater systemic trust in Japanese society than in, say, Korea or Taiwan, and considerable mutual dependence between employers and core employees through the long term employment system and “inefficient” external labour markets (Rohlen, 1974; Clark, 1979; Dore, 1986; Koike, 1987; Aoki, 1988). This employment system itself is not, of course, a permanent feature of the Japanese industrial system but reflected particular manual skill shortages, union structures and pressures, and firm characteristics during the high growth period (Murakami & Rohlen, 1992; Odagiri, 1992). It was easier to institutionalize in postwar Japan because of the strong conventions governing obligations and cooperation within and between organizations (Iwata, 1992), but these relatively long lived features of Japanese society were not sufficient to bring it about in different socio–economic circumstances. Institutionalized management control systems, then, are the outcomes of specific combinations of processes and influences which empirically often generate contradictory pressures. Accordingly, the comparative analysis of such systems requires detailed understanding of how the phenomena discussed in this paper are interrelated in particular firms, industries and societies, and how they are changing.

This sort of understanding is unlikely to be achieved through simple correlational analysis of responses to questionnaires which ignores the specific context in which control systems operate and the actions of participants. It involves demonstrating how broad institutional features of societies and cultures are linked to the specific nature of firms and managerial and other groups such that they develop particular logics and rationalities which encourage the use of some control systems and accounting practices in preference to others. It also involves studying the processes by which, say, particular budgetary systems are used and interpreted in practice, rather than simply recording managers’ responses to questions about which procedures they follow. The comparative analysis of management control and accounting should, then, be based more upon ethnographic and fieldwork research, as well as detailed knowledge of particular societies and organizations than upon on postal surveys and descriptive statistical analysis.

References


