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Internal Control Re-Design: An Exploratory Study of Australian Organisations

by

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Abstract:

This field study examines internal control re-design in eight Australian organisations. Interviewees emphasise the importance of building control into the system; whether control is built into the culture of the organisation’s environment (e.g. integrity and ethical values, accountability), or computer controls built into the information system. The new patterns of accountability associated with empowerment mean that traditional internal accounting controls such as multiple layers of authorisations and checking (which typically occurred prior to an activity) are being replaced with control procedures designed to monitor in real time or after the event. As expected, many of the traditional accounting controls (e.g. multiple layers of authorisation, cross-checking, supervision, segregation) are of diminished importance for effective control. Our results provide some practical guidance to organisations embarking on control system re-design, as well as assistance to auditors in designing appropriate audit procedures for a changing control environment. Implications for auditing standards are discussed.

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1. Introduction

New technologies, organisational structural changes, and the competitive pressure of the global economy have important implications for internal control design. Modern management techniques such as empowerment, Total Quality Management and Re-engineering have practical implications for internal control that include organisational downsizing, decentralisation, fewer layers of middle management, greater delegation of responsibility, the use of multi-skilled work teams and a tendency to simplify processes. Changes in organisation structure, design and culture require internal control re-design, for example there are fewer resources available (i.e., people) to implement traditional internal accounting controls, and, as Hooks et al. (1994) observe, there are fewer middle managers, the historical ‘gatekeepers’ of control, to perform many of the traditional control activities (i.e., multiple layers of authorisation). Otley (1994 p.297-298) elaborates “In essence we are having to move from a hierarchical, top-down approach to control to one where self-control, innovation, and empowerment are of at least equal importance.”

The international accounting profession has recognised these changes in revising the various professional guidance on internal control (see COSO 1994; CoCo 1995; ISA 400 1994; AUS 402 1995; AS-402 1998). The emerging control criteria represent a marked change in direction from the accounting profession’s previous narrow focus on internal accounting controls (e.g., multiple layers of authorisation, cross-checking, supervision, segregation). Implicit in the revisions to the professional guidance, particularly in the United States and Canada, is a realignment of emphasis on control elements; away from the accounting profession’s traditional myopic focus on internal accounting controls in pursuit of financial reporting objectives. There is a move to greater emphasis on controls characterised as the control environment (e.g., informal controls) that is consistent with longstanding recommendations in the management control literature (see Langfield-Smith 1995; Otley 1994).

There is limited research into the changing nature of internal control in organisations and the relevance of the profession’s guidance on control. COSO (1994) calls for further research into its control framework, and this exploratory field study purposively selected eight Australian organisations actively evaluating their system of internal control to gain a richer understanding of how the modern internal control

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1 There is evidence of substantial downsizing in the 1990s. For example, Blondell (1997) reports downsizing of more than 50% in Australia in the 1990s, Wagar and Gibson (1996) report downsizing rates of 36.1% in Australia and 35.2% in New Zealand and The Australian CPA reports that 30,000 banking jobs have been abolished between 1991 and 1997 (Anon 1998). Similarly in the US, Buch (1992) report that 85% of the Fortune 1000 firms had downsized (cited in Wagar and Gibson 1996).


3 The COSO Report was issued in 1992. In 1994, they re-issued the 1992 report with an addendum “Reporting to External Parties”.

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system operates. Using open and closed ended questions during interviews with accounting staff in eight organisations, we investigate the importance and changing emphasis of internal control elements. Consistent with the changing emphasis in the professional literature on internal control, we expected that controls categorised as the control environment would be at least equally important as control activities (e.g., information processing controls or traditional accounting controls such as authorisation), and that traditional internal accounting controls such as multiple layers of authorisation, cross checking (i.e., independent internal verification) would be of diminished importance for effective control.

2. Internal Control

2.1 The Accounting Profession’s Traditional Focus on Internal Controls

Until recently, the focus of the accounting profession’s definition of internal control was on financial reporting and compliance aspects of control. While the American Institute of Accountants 1949 definition of internal control included operational, financial reporting and compliance aspects, successive amendments in 1958 and 1972 saw the definition separated into accounting controls and administrative controls (see Mautz and Winjum 1981). With the aim of minimising litigation risk, the combined influence of the AICPA (1958 and 1972) amendments focused accountants’ and auditors’ attention on traditional internal accounting controls (e.g. authorisation, cross-checking, segregation), thereby narrowing the focus of control (see Mautz and Winjum 1981; Merchant 1989). However, the wisdom in restricting accountants’ and auditors’ responsibility to accounting controls is increasingly the subject of intense debate.

The accounting profession’s “soul searching” regarding audit failures in the 1980s was influential in prompting the profession’s re-evaluation of internal control. The National Commission on Fraudulent Financial Reporting (Treadway Commission) (1987), the Commission to Study the Public’s Expectations of Audits (MacDonald Commission) (1988) in Canada, and the Committee on the Financial Aspects of Corporate Governance (Cadbury Report) (1992) in the United Kingdom, were established to investigate the reasons behind the large number of company failures, fraud and audit failures. Key findings from these reports included the importance of an effective system of internal control and confirmation of the lack of consensus on the definition of internal control. The Treadway Commission (1987), the MacDonald Commission (1988) and the Cadbury Report (1992) recommended a need to establish a clearer guidance on internal control.

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4 The Treadway Commission was established following a number of highly publicised audit failures in the United States (e.g., SEC Accounting Series Release No 173, 1975) and evidence of bribes and corruption in major U.S. corporations from the 1973-1976 Watergate investigations (see COSO, 1994, p. 3-94).
2.2 Emerging Internal Control Systems

In response, the professional literature on internal control has made progress towards developing international control criteria. The COSO (1994) framework is regarded as the foundation of the modern approach to control. In the United Kingdom, the Institute of Internal Auditors (1994) include COSO (1994) in the appendix to its professional briefing note on internal control. In Canada, the revised guidance on internal control (CoCo 1995) was built on the COSO approach. While revisions to the Australian, New Zealand and international auditing standards on internal control (AUS 402 1995; AS-402 1998, ISA 400 1994) do not cite COSO, the influence is apparent particularly in the extended discussion of the control environment and diminished discussion of traditional control procedures.

Consistent with the American Institute of Accountants' 1949 definition of internal control, COSO (1994) suggests that for effective control a wide range of internal control elements should operate dynamically in pursuit of multiple organisational objectives; operational, financial reporting, and compliance. This approach reflects the recognition by the accounting profession that the traditional narrow focus on internal accounting controls is no longer relevant. Because failures of operational controls can lead to unauthorised use or disposition of assets, the UK Institute of Internal Auditors consider it artificial to attempt to distinguish between financial and operational controls (IIA-UK 1995). CoCo (1995 p. 1) states “Control needs to be understood in a broad context. For example, control is as much a function of people’s ethical values and beliefs as it is of standards and compliance mechanisms.”

Today organisations are less able to perform many internal accounting controls (e.g., multiple layers of authorisation, cross-checking, supervision, segregation) because, as previously argued, they employ fewer people due to technological change, new management techniques, and organisational restructuring. However, the revised professional guidance highlights opportunities to strengthen overall control. The audit literature acknowledges the importance of the revised control criteria in achieving effective internal control (see Armour 2001; Kinney 2000). Effective control requires a range of control elements and to this end COSO (1994) identifies five basic control categories: control environment, control activities, risk assessment, information and communication, and monitoring. The following discussion of the five control elements serves to emphasise these changes.

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5 COSO (1994 p.3) includes five categories (e.g., control environment, control activities, risk assessment, information and communication, and monitoring) and defines internal control as: a process, effected by an entity’s board of directors, management, and other personnel, designed to provide reasonable assurance regarding the achievement of objectives in the following categories:

- Effectiveness and efficiency of operations
- Reliability of financial reporting
- Compliance with applicable laws and regulations
2.2.1 Control Environment

The literature suggests that at the heart of effective control is an emphasis on controls categorised as the control environment; management’s philosophy and operating style, integrity and ethical values, assignment of authority and responsibility (e.g., accountability), human resource practices (e.g., training, performance appraisal, remuneration and compensation, employee counselling), audit committee, and internal audit. While long recognised as important (see Haskins 1987; Basu and Wright 1997) the considerable emphasis on the control environment is apparent in COSO (1994 p. 23), “It is the foundation of all other components, providing discipline and structure.” Reiterating the importance of the environment, Cohen, Krishnamoorthy and Wright (2002) found in their survey of auditors that “tone at the top” (i.e., attitude of senior management) is the dominant part of the governance mosaic.

The importance of informal controls is well recognised in the management accounting literature (see Langfield-Smith 1995; Otley 1994) and is reflected in a small number of related studies in the audit area (see Haskins 1987; Hooks et al., 1994; Basu and Wright 1997). Implicit is the notion that modern management techniques and organisational restructuring require a change in the control philosophy towards greater reliance on informal controls that influence the motivation and behaviour of employees. Hooks et al. (1994 p. 88) describe the control environment “as in part, an operationalization of organizational culture”. Schein (1989 p.6) defines organisational culture as, “the deeper level of basic assumptions and beliefs that are shared by members of an organization, that operate unconsciously, and that define in a basic “taken-for-granted” fashion an organization’s view of itself and its environment.” Collins and Porras (1994 p. 72) describe how culture might influence control in an organisation embracing empowerment, “people who internalize a strong set of beliefs don’t need command from above to be able both ‘do their own thing’ and ‘do the right thing’ for the organization.” Based on interviews in a small sample of UK companies, Ezzamel, Lilley and Willmott (1997 p. 453) find that control internalised into organisational subjects in the form of self-discipline, diminishes the relevance of “obtrusive hierarchical control.” Placing greater authority and responsibility in the hands of fewer employees (i.e., empowerment) can therefore be reconciled with control by placing greater emphasis on the control environment.

2.2.2 Control Activities

COSO (1994) illustrates control activities as top-level reviews, functional/activity management, information processing, physical controls, performance indicators, and segregation of duties. While the professional guidance continues to emphasise some traditional internal accounting controls (e.g., physical controls, segregation of duties) (see COSO 1994, Chapter 4), others such as authorisation and verification (i.e., cross-checking) are only briefly mentioned in the abstract in COSO’s illustration of control activities, which suggests these control activities are of diminished importance. This interpretation is consistent with research findings that traditional
internal accounting controls are less important after the implementation of re-engineering (see Sia and Neo 1997; Frigo, Krull and Yates 1995).

There are a number of explanations for the reduced emphasis on some traditional internal accounting controls. An important reason is the link between organisational structure, culture and internal control design (see Bell, Marrs, Solomon, and Thomas 1997). New management techniques and organisational restructuring necessitate employee empowerment that requires a change in control culture and design. For example, it is inconsistent to empower staff to make decisions, and require them to obtain prior approval (authorisation). In the move from top-down to flatter structures there are fewer resources to implement internal control. For example, there are fewer middle managers, the traditional 'gatekeepers' of control, who were previously responsible for the assembly and distribution of information, checking and authorising transactions, and the supervision of employees (MacErlean 1993; Hooks et al. 1994; Simons, 1995). Also, it is not clear whether the bias to internal accounting controls that characterised the professional accounting literature actually gave organisations effective control (Merchant 1985).

The specific identification in COSO of top level reviews and direct functional or activity management as control activities underscores the new patterns of accountability associated with empowerment. COSO identifies the monitoring of actual performance to budgets, plans, etc.. CoCo (1995) elaborates further in discussing the monitoring of internal and external environments, comparison of results against quantitative and qualitative performance targets, and the move away from the focus on accounting numbers towards both accounting and operational measures such as quality (see also Wruck and Jensen 1994). Ezzamel et al. (1997) find a greater emphasis on mechanisms of accountability in concert with ‘environmental’ control by means of self discipline and self monitoring.

2.2.3 Risk Assessment

Risk assessment involves the use of systematic procedures to identify and analyse relevant risk and the subsequent management of risk. Risk assessment incorporates the broader concept of “business risk,” not just the risk related to fraud, error or misstatement in financial reporting. Risk assessment should include a strong focus on a cost versus benefit approach to control. “Risks are acceptable if their avoidance is not cost-justified” (CoCo 1995 p. 12). There is some evidence of companies adopting a risk management approach to internal control (see Mills 1997); thus the blanket “one size fits all” template of control is no longer appropriate.

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6 Some reasons why this may occur include; a “threshold effect” above which additional control activities have little impact on the prevention and detection of fraud or error (Willingham and Wright 1985); the failure to enforce existing controls, or management override of internal controls (Albrecht, Howe and Romney 1984); or, adverse employee attitudes to explicit controls (Ouchi 1979).
2.2.4 Information and Communication

Recognising the emerging importance of information and communication, COSO (1994) includes it as a separate control component. Relevant and timely information, and effective channels of communication are an integral part of an internal control system. Benefits include improved communication about expectations, responsibilities and objectives (CoCo 1995); enhanced decision making (Davis and Militello 1994); and reduced dependence on individual employees who assist in the prevention and detection of fraud (Hooks et al. 1994). A particular innovation consistent with employee empowerment is information sharing, which involves providing employees with the right information on a timely basis and aims to develop a feedback loop as part of the information system (Davis and Militello 1994). An appropriate information feedback loop enables empowered employees to monitor their own performance as they take ownership of the data on which they rely.

2.2.5 Monitoring

A systematic overview or monitoring of the quality of an organisation’s control system is needed and results should be communicated to those accountable for internal control (COSO 1994). The organisation should constantly challenge the assumptions underlying objectives and plans (CoCo 1995). An assessment of risk will influence the scope and frequency of separate evaluations of internal control systems.

2.3 Australian, New Zealand and International Auditing Standards

During the 1990’s the Australian (AUS 402 1995), New Zealand (AS-402 1998), and International (ISA 400 1994) auditing standards were revised to incorporate an interpretation of internal control more consistent with COSO (1994) and CoCo (1995). For example, the revised Australian and International standards contain an extended discussion of the internal control environment and incorporate a separate categorisation on the information system. While COSO (1994) and in particular CoCo (1995) focus on building control around people reflecting the new patterns of accountability, this point is implicit, rather than explicit in the auditing standards.

2.4 Summary

The preceding literature suggests that in contrast to the accounting profession’s historically narrow focus on traditional internal accounting controls, the revised international guidance (COSO 1994; CoCo 1995) suggest that a wide range of control elements are important to achieving effective control.\(^7\) Controls categorised

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\(^7\) The broad framework of control elements can be adapted by organisations according to their different circumstances such as differences in management philosophy, structure, and size (CoCo 1995; COSO 1994). For example, CoCo (1995) states that organisations which adopt a “top-down, command-and-controlled” approach would emphasise formal controls, whereas organisations which have downsized and adopt an “empowered” approach would emphasise informal controls.
as the control environment have attracted considerable emphasis in the literature and are expected to be of at least equal importance for effective control as control activities. While some control activities remain important (e.g., budgetary procedures and some information processing controls), many traditional internal accounting controls activities are likely to be less relevant in modern organisations (e.g., multiple layers of authorisation, cross-checking). The purpose of this study is to investigate the relevance of the professional guidance on internal control and to gain a richer understanding of how control systems operate.

3. Method

An exploratory field study is used because research into the emerging internal control criteria is in its early stages, and there is little research into internal control practices in Australian organisations. Using the Australian Centre for Management Accounting Development (ACMAD) mailing list, we identified eight Australian organisations that were actively evaluating their system of internal control to find an illustration of best practice. The eight organisations were all members of ACMAD.

Our initial intention was to interview the person most knowledgeable about internal control in each organisation. This initially led us to interview accountants, who recommended another person (e.g., internal auditors) knowledgeable on matters of internal control to gain consensus on internal control. Fifteen interviews were conducted with accountants and internal auditors in eight organisations in 1995 (see Table 1).

The field study used semi-structured interviews and a questionnaire to develop a deeper understanding of the internal control re-design issues. Qualitative and

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8 Research to date has focused on examining particular control elements, for example, communication (Hooks et al. 1994), human resource practices (Carey and Stringer 1995), and risk assessment (Mills 1997). COSO (1994) utilise multiple methods (e.g., interviews, questionnaires) in developing their control framework, however, details of this research are not published. CoCo (1995) does not report details of its methodology.

9 ACMAD (1994) states that its aim “is the focus for a range of activities designed to move the quality of management accounting practice to the international state-of-the-art, thereby enhancing the productivity and competitiveness of Australian organisations.” ACMAD is now Incite Connect.

10 Otley (1994 p. 298) argues that future research should be conducted in “fast-moving companies operating in rapidly changing environments so as to provide illustrations of best practice at the leading edge of adaptive activity.”

11 In five organisations (A, B, D, E, &F) we interviewed one accountant and one internal auditor, in two organisations (C & G) we interviewed two accountants as the organisation either did not have an internal audit department (C) or we were not granted permission to gain access to an internal audit (G). A limitation of the present study is that we gained access to interview only one accountant in organisation H (See limitations section of the paper).
Table 1
Organisations in the Field Study

<table>
<thead>
<tr>
<th>Company</th>
<th>Sector, Industry</th>
<th>Business environment changes</th>
<th>Management techniques and organisational structure adopted</th>
<th>Interviewees</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Government, service</td>
<td>Industry deregulation, competitive pressures, efficiency-driven.</td>
<td>Decentralisation, downsizing, empowerment, re-engineering, multi-skilling, teams, benchmarking.</td>
<td>Accountant, Internal Auditor</td>
</tr>
<tr>
<td>B</td>
<td>Government, service</td>
<td>Industry deregulation, competitive pressures, efficiency-driven.</td>
<td>Decentralisation, downsizing, TQM, re-engineering, empowerment, teams, benchmarking.</td>
<td>Accountant, Internal Auditor</td>
</tr>
<tr>
<td>C</td>
<td>Government, service</td>
<td>Industry deregulation, competitive pressures.</td>
<td>Decentralisation, downsizing, TQM and process improvement, empowerment, teams, multi-skilling, benchmarking.</td>
<td>Accountants (2)</td>
</tr>
<tr>
<td>D</td>
<td>Public, service</td>
<td>Industry deregulation and privatisation, competitive pressures, efficiency-driven.</td>
<td>Decentralisation, downsizing, TQM and process improvement, empowerment, teams, multi-skilling, benchmarking.</td>
<td>Accountant, Internal Auditor</td>
</tr>
<tr>
<td>E</td>
<td>Private, manufacturer</td>
<td>Competitive pressures, efficiency-driven.</td>
<td>Decentralisation, downsizing, TQM, process improvement, empowerment, teams, multi-skilling, benchmarking.</td>
<td>Accountant, Internal Auditor</td>
</tr>
<tr>
<td>F</td>
<td>Public, bank</td>
<td>Deregulation, restructuring - branches closed, efficiency-driven.</td>
<td>Downsizing, re-engineering, empowerment, teams, multi-skilling, benchmarking.</td>
<td>Accountant, Internal Auditor</td>
</tr>
<tr>
<td>G</td>
<td>Public, bank</td>
<td>Deregulation, efficiency-driven.</td>
<td>Decentralisation, downsizing, re-engineering, empowerment, teams.</td>
<td>Accountants (2)</td>
</tr>
<tr>
<td>H</td>
<td>Public, mining</td>
<td>Efficiency-driven.</td>
<td>Decentralisation, downsizing, empowerment, process simplification</td>
<td>Accountant</td>
</tr>
</tbody>
</table>

* Where possible, the closed-ended questionnaire was completed by two people in each organisation. This resulted in fifteen closed ended questionnaires completed by an accountant and internal auditor in organisations A, B, D, E, F, two accountants in organisation C, G, and one accountant in organisation H.

quantitative approaches have different, complementary strengths and a study using both methods is more comprehensive (Neuman 2000). The qualitative data provided rich insights into internal control. The quantitative data enabled measurement of the degree of importance and changing emphasis on the various elements. This provides cross-validation opportunities where the qualitative and quantitative findings converge (Jick 1979).
The semi-structured interviews enabled greater probing of the issues, context and explanations (see Parker 2000). Interviewees were encouraged to talk freely about changes to their internal control systems and important control elements before being exposed to the researchers’ classifications (see Williamson et al. 1982). The semi-structured questions were: “Please describe the impact of organisational changes on your internal control system” and “Following organisational changes, which internal control elements have become more/less important?” The duration of most of the fifteen interviews ranged between one and three hours and participants anonymity was assured. The interviews were taped and transcribed. The qualitative data analysis approach was to organise responses according to the research questions e.g., which internal controls are more important. Qualitative results provided rich insights into how internal controls were being re-designed and why these changes were occurring.

The questionnaire used a seven-point likert scale to measure interviewees’ perceptions of the importance and changing emphasis of a broad range of control elements. The particular control elements selected for the closed-ended questionnaire comprised a representative range of internal controls drawn from the literature (see AUS 402 1995; CoCo 1995; COSO, 1994; IIA-UK 1994; The Institute of Chartered Accountants in Australia 1972, 1973, 1976). To measure whether the perceived importance of control elements had changed over time, interviewees were asked to indicate if their emphasis on control elements had changed over the preceding four-year period. Responses to closed-ended questions were analysed using a non-parametric related sample test (Wilcoxon Signed Ranks Test) to establish the importance and changing emphasis of the internal control environment compared to control policies and procedures.

4. Results and Discussion

The eight organisations that participated in the study were from a range of industries (see Table 1). Organisations A, B, and C were from the service sector operating in newly deregulated industries. Organisation D also operated in the service sector, and had changed from government control to being publicly listed. Organisation E was a manufacturer owned by a large multi-national organisation. Organisations F and G were banks operating in the deregulated banking industry, and Organisation H was a publicly listed mining organisation.

The eight organisations were operating in a turbulent business environment creating pressure to improve efficiency. In response, the organisations had changed their structure (e.g., decentralised their operations, downsized), and had adopted a range

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12 The questionnaire was pilot tested on two accounting academics and two industry accountants to ensure face and content validity.

13 The objective of the study was to capture a predicted changing emphasis over time. In the absence of established methodology, a four-year time period was arbitrarily selected.
of management techniques such as empowerment, reengineering, Total Quality Management, multi-skilling, teams, etc. (see Table 1).

4.1 Descriptive Results

Table 2 presents the mean scores and standard deviation of the importance and changing emphasis of a range of elements from two of the COSO internal control categories i.e., control environment and control activities\(^{14}\) (the control environment elements are in italics). Control activities, particularly traditional accounting controls (e.g., cross-checking, supervision and segregation), would appear to be of diminished importance, while controls characterised as the control environment achieved high ratings of importance. Interviewees also rate controls from two other control categories i.e., risk assessment (importance, Mean = 5.1, SD = .88; changing emphasis, Mean = 5.8, SD = .38) and information sharing (importance, Mean = 5.7, SD = 1.3; changing emphasis, Mean = 5.4, SD = 1.06). Results indicate a broad range of control elements are rated important for effective control.

4.2 Quantitative Results

To investigate whether the eight organisations differed in their ratings of importance of the 18 environmental controls compared with the 17 control activities, a non-parametric related sample test was applied (Wilcoxon Signed Ranks Test). Mean scores were calculated for each organisation combining the ratings of importance of the 18 environmental controls and combining the 17 control activities. We find environmental controls are rated as more important for effective control than control activities \((z = 1.82, p < 0.1).^{15}\) Similarly, results suggest organisations place greater emphasis on the control environment than on control activities \((z = 2.24, p <.05).\) Findings suggest control activities are of diminished importance for effective control and that environmental controls have emerged as of fundamental importance for effective control.

4.3 Qualitative Results

Qualitative and quantitative findings confirm importance and emphasis on informal controls categorised as the control environment, and the declining emphasis on control activities. Qualitative results provide insights into how and why this change is occurring.

All the organisations studied have restructured and adopted a range of new management techniques which has led to internal control re-design. A view echoed by all interviewees is a changing approach to internal control, away from multiple

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\(^{14}\) Where there is more than one interviewee from an organisation, we included the mean response for that organisation. A mean score is calculated for seven of the eight organisations (see Table 2).

\(^{15}\) The result was marginally significant at \(p = 0.069.\)
### Table 2.

Interviewees mean ratings (and standard deviations) of the perceived importance and changing emphasis over the past four years on two categories of controls i.e., control activities and control environment.

<table>
<thead>
<tr>
<th>Question</th>
<th>Importance Mean (SD) (n=8)</th>
<th>Changing emphasis Mean (SD) (n =8)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Integrity and ethical values</strong></td>
<td>6.1 (.88)</td>
<td>5.3 (.75)</td>
</tr>
<tr>
<td><strong>Accountability</strong></td>
<td>5.9 (.79)</td>
<td>6 (.38)</td>
</tr>
<tr>
<td><strong>On-going training</strong></td>
<td>5.8 (.80)</td>
<td>5.4 (.75)</td>
</tr>
<tr>
<td><strong>Budgetary procedures</strong></td>
<td>5.8 (.57)</td>
<td>5.1 (.67)</td>
</tr>
<tr>
<td><strong>Output – user reconciliation</strong></td>
<td>5.8 (.88)</td>
<td>5 (.85)</td>
</tr>
<tr>
<td><strong>Documentation - audit trail</strong></td>
<td>5.8 (.96)</td>
<td>5 (1.8)</td>
</tr>
<tr>
<td><strong>Management’s philosophy and operating style</strong></td>
<td>5.6 (.56)</td>
<td>5.4 (.73)</td>
</tr>
<tr>
<td><strong>Access – computer system</strong></td>
<td>5.6 (1.7)</td>
<td>4.6 (1.7)</td>
</tr>
<tr>
<td><strong>Performance appraisal</strong></td>
<td>5.4 (.98)</td>
<td>5.4 (.88)</td>
</tr>
<tr>
<td><strong>Initial training</strong></td>
<td>5.4 (.82)</td>
<td>5.3 (.75)</td>
</tr>
<tr>
<td><strong>Remuneration/compensation</strong></td>
<td>5.4 (1.1)</td>
<td>5.2 (.70)</td>
</tr>
<tr>
<td><strong>Counselling procedures</strong></td>
<td>5.4 (.38)</td>
<td>4.9 (.66)</td>
</tr>
<tr>
<td><strong>Entry education levels</strong></td>
<td>5.3 (.96)</td>
<td>5.4 (.88)</td>
</tr>
<tr>
<td><strong>Recruitment and selection</strong></td>
<td>5.3 (.92)</td>
<td>5.3 (.85)</td>
</tr>
<tr>
<td><strong>Promotion/career paths</strong></td>
<td>5.3 (1.2)</td>
<td>5.1 (.92)</td>
</tr>
<tr>
<td><strong>Internal audit</strong></td>
<td>5.3 (1.8)</td>
<td>5.1 (1.1)</td>
</tr>
<tr>
<td><strong>Input - program controls</strong></td>
<td>5.2 (1.7)</td>
<td>4.9 (1.4)</td>
</tr>
<tr>
<td><strong>Audit Committee</strong></td>
<td>5.1 (1.6)</td>
<td>5.5 (1.0)</td>
</tr>
<tr>
<td><strong>Incentives/bonuses</strong></td>
<td>5.1 (1.3)</td>
<td>5.3 (1.65)</td>
</tr>
<tr>
<td><strong>Authorisation</strong></td>
<td>5.1 (1.6)</td>
<td>4.4 (1.27)</td>
</tr>
<tr>
<td><strong>Access - physical assets</strong></td>
<td>5.0 (1.8)</td>
<td>4.3 (1.07)</td>
</tr>
<tr>
<td><strong>Defined authority</strong></td>
<td>4.9 (1.55)</td>
<td>4.6 (.94)</td>
</tr>
<tr>
<td><strong>Documentation – systems</strong></td>
<td>4.8 (1.7)</td>
<td>5.3 (.92)</td>
</tr>
<tr>
<td><strong>Job descriptions</strong></td>
<td>4.8 (1.4)</td>
<td>4.6 (1.2)</td>
</tr>
<tr>
<td><strong>Dismissal procedures</strong></td>
<td>4.8 (1.4)</td>
<td>4.4 (1.32)</td>
</tr>
<tr>
<td><strong>Defined organisational structure</strong></td>
<td>4.7 (1.3)</td>
<td>4.7 (1.3)</td>
</tr>
<tr>
<td><strong>Grievance procedures</strong></td>
<td>4.6 (1.2)</td>
<td>4.7 (1.3)</td>
</tr>
<tr>
<td><strong>Processing - reasonableness tests</strong></td>
<td>4.6 (1.2)</td>
<td>4.3 (1.4)</td>
</tr>
<tr>
<td><strong>Input – batch controls</strong></td>
<td>4.4 (1.7)</td>
<td>3.3 (.75)</td>
</tr>
<tr>
<td><strong>Output - distribution controls</strong></td>
<td>4.3 (1.6)</td>
<td>4.1 (1.5)</td>
</tr>
<tr>
<td><strong>Processing – cross footing</strong></td>
<td>4.2 (1.3)</td>
<td>4.2 (1.5)</td>
</tr>
<tr>
<td><strong>Segregation of duties</strong></td>
<td>3.9 (1.5)</td>
<td>3.4 (1.3)</td>
</tr>
<tr>
<td><strong>Supervision</strong></td>
<td>3.7 (1.2)</td>
<td>3.1 (1.3)</td>
</tr>
<tr>
<td><strong>Cross checking</strong></td>
<td>3.3 (1.44)</td>
<td>2.8 (.8)</td>
</tr>
</tbody>
</table>

Note: Higher mean scores indicate that these control elements are more important (1 = Low importance, 4 = medium importance, 7 = high importance), and more emphasis is being placed on these control elements today compared to four years ago (1 = less emphasis, 4 = no change, 7 = greater emphasis). The control environment elements are shown in italics.
layers of authorisation, tight supervision and cross-checking, towards an emphasis on empowerment and accountability. Interviewees emphasised the importance of creating an environment that fosters employee integrity and performance. This change in philosophy is illustrated by the following comments:

“The soft side of the organisation. Building pride within the organisation ... It becomes the culture, a part of the organisation... In fact they [employees] are conscious of doing the right thing, which I think is in itself the best control there is ...” [H – A] [16]

“... the whole culture of the organisation has changed ... to where the responsibility is put back to the owner of the process ... rather than us [the finance department] checking everything and saying “Well is that right?” “How do we know if it is right or not?” [C-A]

“I don’t believe that the doer, checker mentality that we had was 100% effective. My view is that since we have moved away from that we are probably more effective ... getting it done right the first time so that we can get away from the notion of having multiple levels of checking of activity ... So the new concept is getting it done right the first time and even where checking occurs instead of checking 100% we are going away from that concept to checking high risk areas. That has been a fairly significant change in terms of culture. Some people have had to be dragged through that [cultural change] kicking and screaming.” [G-A]

“Now they are held accountable for what they are signing off. Previously they weren’t. The delegated authority is taken a lot more seriously rather than it just being a rubber stamp, and the importance of it is also taken more seriously, rather than just being a requirement to have those signatures on it. We are actually checking it. It is being accountable.” [A-A]

The preceding comments highlight the link between organisational design, structure, and culture for effective control (see Bell et al, 1997). Findings are consistent with the management literature that identifies organisational culture as a means of achieving control through self-discipline and internal monitoring (see for example Ezzamel et al. 1997; Collins and Porras 1994). The trend to employee empowerment is influencing the developments in internal control. The following comment is indicative of the comments made by interviewees:

“The very fact that we are empowering people is because you don’t want them to turn around and put too many controls on because that’s contradictory. On one hand you say ‘Yes we believe in you’ and on the other hand you say ‘Oh, but we’re checking everything that you do at the same time’.” [C-A] [16]

The source of each quotation is identified as Organisation A-H, and by interviewee (A, Accountant; IA, internal auditor). This quote is from Organisation A, and is made by the Accountant.
A view reiterated by all interviewees was that economic considerations were driving control system changes.

“You want more accountability out of that person. So you are cutting, instead of three or four people previously involved and you have one or two of those people now to compensate, making sure that those two people can produce accountable results or some statistics that you gauge the controls. Or a situation where two people are empowered you have them connected to another team so you have checks and balances in that sense.” [F – IA]

“Today’s environment can no longer afford to control before the event. It is too cumbersome.” [D – IA]

4.3.1 Control Environment

Interviewees confirm the importance and increasing emphasis on the control environment (see Table 2). This is consistent with a greater emphasis on the control environment in COSO (1994) and CoCo (1995) and conjecture that organisations undergoing organisational restructuring and adopting new techniques (e.g., empowerment, Total Quality Management) tend to place greater emphasis on informal controls (e.g., CoCo 1995; Davis and Militello 1994; Hooks et al. 1994; Otley 1994). The importance of ‘integrity and ethical values’ and ‘management’s philosophy and operating style’ is illustrated by the following comments from interviewees:

“… [integrity and ethics] is critical because if you are going to empower you have to have these attributes. They all have to go together.” [D-A]

“Empowerment has got to consider the integrity of individuals, competency and training of individuals… Management today is focusing on ethics, running the business efficiently with the right set of rules, and accountability.” [E – IA]

However, most striking are the intertwined themes of empowerment and accountability. Descriptive results demonstrate the importance of accountability (importance, Mean = 5.9; changing emphasis, Mean = 6; see Table 2). The link between empowerment and accountability is consistent with research findings in the United Kingdom (Ezzamel et al. 1997). Interviewees elaborate the importance of accountability:

“The focus [that] we are really wanting is more responsibility at the front end, get the right person to sign the invoice and then once you’ve got that the rest just follows.” [F – A]

“We’ve just agreed with our auditors that [Finance] will pay the bill but it will be the responsibility of the manager raising the order to check that he doesn’t overspend.” [B – A]
“Getting it done right the first time so that we can get away from the notion of having multiple levels of checking of activity. People out in the business units sign off an authority to pay. They say ‘I’ve got the goods and this is the account’… we said ‘You are responsible. You’re saying that you’ve signed it off. You are getting paid to do that. We are going to accept and prove that is your signature. We have also got a statement that says you are authorised to sign off that sort of value but once that is proved, the rest is on you’. We will provide feedback through the system.”[G – A]

We find the level of empowerment and accountability varies across the organisations studied. In Organisations A, C, F, G and H, senior managers are empowered to spend within defined limits linked through to budget accountabilities. For example, in Organisation A, employees working off-site are empowered to purchase the goods using a credit card, with accountability built around the credit card statements.

To enhance accountability, incentive programs were used in all but one organisation. For example, in Organisation C, performance based contracts are used for business unit managers, whereas middle managers and other employees have six-monthly bonuses based on organisational wide productivity matrixes, and a range of intrinsic rewards. In organisation D, as well as organisational-wide productivity based bonuses, other incentives include discounts on company share purchases, travel, and three-year interest free loans. Organisation E has quarterly performance reviews and emphasises intrinsic rewards (e.g., recognition) rather than incentives or bonuses. The review process in Organisation E ensures a link to the goals established for teams, departments and divisions. In Organisations A, B and G, senior executives have enterprise agreements with a bonus component linked to performance appraisal (e.g., corporate plans, budgets and key performance indicators). Organisation F has annual performance appraisals, and incentives including share bonuses. Organisation H has performance-based remuneration, which links between 12 ½ - 20% of employees’ remuneration to mine performance (e.g., production, quality, cost, safety, budget).

While most organisations link accountability to performance incentives, consistent with findings by CoCo (1995) and Simons (1994), four organisations were experiencing difficulty in designing appropriate performance measurement systems (i.e., undesirable consequences such as gaming the results, data manipulation, etc.). Organisations B, C, D, and G want the system of performance appraisal to be more closely linked to accountability (i.e., sanctions introduced for poor performance). The following comments illustrate this point:

“It is talked about a lot and that is why I say emphasis is quite high because it is attached to performance appraisal and evolution of authority and responsibility etc. But when it actually hits the fan, I don’t know what happens. I have never seen any examples, not in this area obviously. It might happen in other areas. I don’t know if people are held accountable. It is probably softly, softly accountability. It is not reflected back up in the rewards that people get from appraisals.”[C-A]
“We have never, ever, ever, that I know of, dismissed or severely reprimanded any manager who has his whole systems fall apart. Certainly my audit reports, which can be thick or little, have no impact on the manager in the field at all.” [D-IA]

As expected, following downsizing and empowerment, interviewees perceive other human resource practices as important for effective control (e.g., ongoing and initial training, performance appraisals, remuneration and compensation, employee counselling), with greater emphasis placed on these control elements (see Table 2).

A number of interviewees suggested that the traditional focus on internal accounting controls was counterproductive and that the greater emphasis on the control environment had enhanced the overall level of control. As one internal auditor explained:

“Previously [B] was over-controlled, now managers are responsible, accountable. Before there were 2-3 backups – now people are more careful, more conscious … from ‘doer, checker, to empowerment’ … people are more motivated, more dedicated, more diligent.” [B-IA]

4.3.2 Control Activities

Many control activities are perceived as important for effective control such as budgetary procedures, user reconciliation, audit trail, access to the computer system, internal audit and input program controls (see Table 2). An internal auditor explains the need to build control into the system:

“I think over the last few years when we have been trying to downsize, everybody says ‘Either we get rid of the staff or we worry about segregation of duties’, as they feel that they can’t do both. Whereas our opinion is that if you build the controls into the systems, which you can do, then you don’t need the people and you can still downsize but the system takes care of controls.” [A – IA]

However, all interviewees indicated a move away from traditional internal accounting controls such as cross-checking, segregation of duties, supervision (see Table 2). The following comments elaborate how organisational restructuring and new management techniques have contributed to this change:

“Re-engineering found two, three, or four authorisation levels were there as a comfort buffer … So we were trying to get behind that to work out ‘what are we actually trying to control? What is the thing we are actually worried about?’ and try to find a way around that but still streamline the process.” [F – A]

“I think one of the biggest areas that has tended to go is segregation of duties... Empowerment becomes the other big issue because what you are forced to do with these people is to empower people greater and to a greater level...” [D – IA]
“Well that’s [supervision] being reduced wherever we can because that’s once again the concept of total quality management. These people here are supposed to have enough skill and enough talent to do the job…. [cross checking] basically doesn’t happen anymore. Except in the feedback loop it’ll come back and say this didn’t satisfy the criteria, though it is important but it’s not called cross-checking anymore.” [D – A]

Empowering employees and subsequently holding them accountable implies a shift in the control from prior authorisation to monitoring “after the event” which is consistent with reengineering (Hammer and Champy 1993). All interviewees emphasise the importance of regularly monitoring the budget accountabilities (importance, Mean = 5.8; and emphasis, Mean = 5.1) (see Table 2). COSO (1994) categorises such controls as top-level reviews, direct functional or activity management.

Empowering employees has led to an emphasis on budgetary control that provides feedback on performance to facilitate accountability. These comments from interviewees illustrate the point:

“Most of these things we pick up through checking against the budget ... whether people are out of line with the budget... We have to look at this compared with people’s budget, that’s our clear cut control on this.” [B-A]

“We have reconciliations and management reports going out every month comparing to budget and we also have on-line management. Each manager is responsible for their own budget and their own performance. There is a control, a check that they are monitoring what goes into their accounts… The fact that the information systems are better than what they were three years ago ... now it’s on screen, with graphs looking down in great detail and they can see their actuals and their budgets and they have a variance column and they can drill down from there … they are empowered to keep track of what is going on.” [C-A]

“There is bottom line accountability now which makes a difference. With the devolvement, I guess that is a strength because with the devolvement, they all had to watch their bottom lines and the line managers were given the responsibility of ‘you sign this and you’re responsible for it.’ Whereas previously in a centralised system it was all done at a different level. There is more control given at lower levels. So in that sense it was strengthened I think, as far as delegations and giving people more accountability.” [A–IA]

“Well if you didn’t meet your budget in years past so be it. If you don’t meet your budget now, bye, bye. There is accountability in the process.” [E–IA]

To monitor the performance of empowered employees, interviewees also identified exception reporting (A,B,C,D,F,H), reconciliations (C,D,E,G) and key performance indicators such as production, quality, safety, and customer service (A,D,H).
4.3.3 Risk Assessment, Information Sharing and Monitoring

While risk assessment is not rated as one of the most important control elements (Mean = 5.1, SD = .88), it is rated as the second highest item to which there had been a changing emphasis (Mean = 5.8, SD = .38). Seven organisations employ a formal and systematic risk assessment program as part of their overall monitoring process (A,B,C,D,E,F,G). The application of risk assessment is further revealed in the following quotes:

“It is kind of a holistic approach, everything is looked at, at the same time ... The whole process is looked at and if we change this, then what happens? ... Because you have got cross functional teams, you have different ways of looking at things and you can see what is going to be able to pick things up ... Each branch and each section has gone through their processes, and their major process changes and what are the risks of things going wrong or what will be the risk if something changes? What are the potential risks associated with this process ... now focusing on business risk.” [C – A]

“Sometimes we have to re-think even the traditional controls ... we do the what-if scenarios, ‘What if we take this out, what happens?’ So that’s how we assess it ... if we take away segregation at this point, then what is the impact? Is it minor, major or critical? At the end of the day it is a risk management basis ... Ideally you have compensating control, or the risk level is accepted by the level of management, or modification of the process itself.” [F – IA]

“How can we do this better and more efficiently? We came up with a work flow that moves the paper faster and better. ‘What impact will this have on control?’ Therefore they then effectively go through risk assessment of that process and say ‘If it doesn’t get done what will happen? If it happens at this level of activity what will happen?’ So it goes through that process, it may not be formal but nevertheless it is effective.” [G – A]

Information sharing is an important component of control (importance, Mean = 5.7, SD = 1.3; emphasis, Mean = 5.4, SD = 1.06). Seven organisations encouraged information sharing between their employees. The logic behind information sharing is to encourage ownership of information so that employees can identify and rectify their own and their team’s errors, which enables them to enhance decision making and performance (Davis and Militello 1994). An accountant explains this reasoning:

“We say ‘we want you as a work based team to do this job’, with that activity goes an access to all the data you need to run that job. But you wouldn’t have access to other data. So within that thing there is a complete sharing ... The

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17 Interviewees were asked to rate a range of control elements e.g., control environment, control activities, risk assessment and information sharing. Mean scores and standard deviations for risk assessment and information sharing are reported with the qualitative results. Table 2 includes the ratings of importance and emphasis on control activities and control environment only to highlight the differences between these categories used for the quantitative results.
truth of the matter is that we are all looking at the same data and we are all checking on each other all of the time, we have to just to protect the company's assets … You suddenly find they'll take ownership of it [the information] far, far more if they have got access to and knowledge of what is happening all of the time.” [B - A]

In addition, five organisations (A,D,F,G,H) were building a feedback loop of information into their control system. In one organisation, delegates were provided with the details of purchases that they had authorised (e.g., type, amount and vendor), which enabled these empowered employees to check the integrity of the data, and monitor their own performance.

“We said ‘You are responsible. You’re saying that you’ve signed it off. … We have also got a statement that says you are authorised to sign off that sort of value but once that is proved the rest is on you’. We will provide feedback through the system.”[G – A]

In summary, key qualitative and quantitative findings support the importance and increased emphasis on informal controls categorised as the internal control environment. Consistent with the change in control philosophy towards building control into the culture of the organisation by promoting integrity and a desire to do the right thing, there is greater emphasis on human resource practices (e.g., training, performance appraisal) and in particular an emphasis on holding individuals and teams accountable. However, there are some unintended consequences of linking accountability and incentives (e.g., gaming and dealing with poor performers). Rather than relying on multiple layers of authorisation, as was the case in the past, empowerment and the related emphasis on accountability requires a change in control focus, i.e., monitoring after the event (e.g., budget comparison) and greater information sharing and feedback so that empowered employees can monitor their own performance. As part of a risk based approach to internal control, we find less importance and emphasis on traditional controls such as layers of authorisation, segregation of duties, supervision and cross checking.

4.3.4 Additional Analysis

Motivated by anecdotal evidence that inadequate consideration of the control implications of organisational change have resulted in increased levels of fraud and error (see COSO 1994; Simon 1995) interviewees’ perceptions of internal control effectiveness is considered. At the time of the research, all organisations studied were actively evaluating the adequacy of their internal control systems. Interviewees were asked to rate the effectiveness of their internal control system.

Descriptive results suggest the control systems in the eight organisations studied were tending to be more effective in achieving the various objectives of control (see Table 3). However, only one objective of internal control, ‘Promoting the efficiency and effectiveness of operations’, is significantly more ‘Effective today’ than ‘Effectiveness … four years ago’ (z = 2.42, p < .05, Wilcoxon Signed Ranks Test).
Table 3
Interviewees mean ratings (standard deviation) on the effectiveness of the internal control system, and effectiveness of the internal control system today, compared to four years ago.

<table>
<thead>
<tr>
<th></th>
<th>Effectiveness today</th>
<th>Effectiveness today, compared to four years ago</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean (SD)</td>
<td>Mean (SD)</td>
</tr>
<tr>
<td></td>
<td>n = 8</td>
<td>n = 8</td>
</tr>
<tr>
<td>Reliability of financial reporting</td>
<td>2.2 (.70)</td>
<td>2.8 (.88)</td>
</tr>
<tr>
<td>Compliance with applicable laws and regulations</td>
<td>2.5 (.6)</td>
<td>3.3 (.80)</td>
</tr>
<tr>
<td>Reliability of management reporting</td>
<td>2.6 (.69)</td>
<td>2.5 (.60)</td>
</tr>
<tr>
<td>In general/overall</td>
<td>3.0 (.71)</td>
<td>3.0 (.6)</td>
</tr>
<tr>
<td>Safeguarding assets</td>
<td>3.0 (.93)</td>
<td>3.4 (.11)</td>
</tr>
<tr>
<td>Preventing/detecting fraud and error</td>
<td>3.1 (.10)</td>
<td>3.0 (.62)</td>
</tr>
<tr>
<td>Promoting the efficiency and effectiveness of operations</td>
<td>3.3 (.75)</td>
<td>2.3 (.37)</td>
</tr>
</tbody>
</table>

Note: Higher mean scores indicate that the internal control system is less effective (1= effective, 7= ineffective).

When describing their experiences, interviewees revealed some interesting and sometimes conflicting evidence. While both interviewees in Organisation A felt that control was improving through the use of delegates and increased accountability; one interviewee remarked, “I think we are still a long way from where we’d like to be.” It was noteworthy that in Organisation A, the decentralising of responsibility to small business units resulted initially in a number of problems. For example, in the accounts payable process there were fewer employees to achieve segregation of duties and often an inability to detect duplicate invoices. There was also evidence of a lack of cross-functional responsibility because business unit managers had been able to ignore audit recommendations. In response, the audit committee and senior management now require business unit managers to report on their response to internal audit recommendations regarding matters of internal control.

Control was also perceived to have improved in four organisations (B,D,E,H), although, there was some evidence of control breakdown. For example, in Organisation B, some empowered managers had “massively over-spent”. However, the problem was contained and as a consequence employees were more control conscious. Similarly in Organisation D, an internal auditor expressed concern that empowered business unit managers were given too wide a responsibility and were able to ignore audit recommendations. In organisations C and H, while some employees welcomed empowerment, others felt uncomfortable with the additional responsibility. In organisation C, there were mixed views on the internal control changes with one accountant stating that control was worse in some areas.
Tight control remained a feature in the two banks, organisations F and G. In organisation G, the effectiveness of control was perceived to have improved with the move to employee empowerment. However, a recent staff survey had found that employees did not feel management trusted them. Further, the organisation was experiencing problems when it moved from tight centralised control to a decentralised structure. The financial executive said that initially, “it was almost anarchy in terms of do your own thing,” and business units competed with each other to the extreme – even competing for the same customer. Problems also occurred in credit management because the volume based performance measures did not measure the quality of the lending. These issues highlight the evolving nature of control.

Organisation E, a private manufacturer, was perhaps the exception where the internal auditor explained that the drive for efficiency and cost reduction had weakened control because managers were so busy they could not always focus on control.

5. Conclusion

The exploratory qualitative and quantitative findings suggest that effective control requires the operation of a dynamic range of internal control elements. Results suggest that the modern approach is for control to be built into rather than built onto the business system; whether that be environmental controls (e.g., integrity and ethical values, accountability) built into the culture of the organisation, or computer controls built into the information system.

The eight organisations studied were going through organisational restructuring and changing their control objectives, strategies and culture to emphasise empowerment and accountability. Interviewees placed greater importance and emphasis on controls such as integrity and ethical values, human resource practices and tone at the top. Increased accountability has changed the focus of control to monitoring after the event (e.g., budgets), greater information sharing, increased emphasis on human resource practices (i.e., training, performance appraisal), and the development of a closer link between accountability and incentives. We find that many traditional internal accounting controls, (i.e., multiple layers of authorisation, cross-checking, supervision, segregation of duties) are of diminished importance for effective control. The importance of a risk-based approach to control is also elaborated. Results provide some practical guidance for organisations in designing their internal control systems and auditors are designing appropriate procedures for a changing control environment.

Results suggest that organisations surveyed were adapting their control systems in accordance with the revised professional guidance on internal control. The Australian (AUS 402 1995), New Zealand (AS-402 1998), and International (ISA 400 1994) auditing standards were revised in accordance with the changes recommended in COSO (1994) and CoCo (1995). In particular, the revised auditing standards include an extended discussion of the internal control environment, and
incorporate a separate categorisation on the information system. Our findings confirm the wisdom of the change. Reflecting the new patterns of accountability, our results confirm the suggestion in COSO (1994) and in particular CoCo (1995), that organisations are increasingly emphasising accountability and building control around the performance of people. While this point can be inferred from the Auditing Standards, we recommend the standards include a more explicit discussion to this effect.

Results from the analysis into internal control effectiveness revealed that while interviewees perceived effectiveness had generally improved, responses to open-ended questions provide some conflicting evidence. As their control systems were evolving and changing, interviewees identified a number of problems such as an inadequate link between accountability and performance. The pressure for greater efficiency will ensure organisations continue to grapple with issues concerning internal control and the impact of ongoing change on internal control effectiveness remains an important and emerging area for future research.

The findings in this paper must be considered in the context of a number of limitations. This research was necessarily exploratory because there was limited empirical research in this area. Results reflect subjective interpretation informed by interviews with company accountants and internal auditors. The eight Australian organisations were not chosen randomly so care should be taken with generalising these results. A further limitation is the research relies on the interviewees’ perceptions that may be influenced by lapses of memory or the effect of hindsight. To overcome this limitation, we sought to gain a consensus view on internal control by interviewing two people from each organisation; however, in organisation H access was limited to one accountant. Future research on a larger more representative sample is required in order to generalise findings. In particular, it would be interesting to investigate how differences in management philosophy (e.g., empowered, top-down), organisational structure, culture and size impact on internal control design.

References


The Institute of Chartered Accountants in Australia (1972) *Internal Control Procedures 1972 Revision (F4)*, The Institute of Chartered Accountants in Australia, Sydney.


