

MALAYSIAN ACCOUNTING REVIEW

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KNOWLEDGE ACTIVISM BY CPAs IN PUBLIC SECTOR ORGANISATIONS

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Abstract

Structural reforms in the public sector during the past two decades have given accounting professionals more central roles in knowledge management in the sector. This study focuses on the knowledge activism of members of CPA Australia who hold senior and top positions in Australian public sector entities at federal, state or local government levels. Von Krogh et al.'s (1997) dimensions of knowledge activism - knowledge catalyst, connector and merchant of foresight - are operationalised in this study. Through a survey of CPAs working in senior/top positions in the public sector, a description is first provided of their levels of knowledge activism. Findings are then presented on tests of hypothesized relationships between public sector entities' internal aspects of information-consciousness and accountability-orientation, as contextual variables, and the extent of engagement of CPAs in knowledge activism, particularly the role of knowledge connector. Results of this study provide insights into the knowledge activism of accountants working in various types of public sector entities and presents preliminary evidence of factors influencing this activity.

KEYWORDS: *Public sector accounting, knowledge activism, organizational information consciousness, accountability.*

INTRODUCTION

Successive reforms to federal, state and local government public sector entities in areas of funding methods, performance measurement, resources management and accountability reporting during the past two decades have required senior bureaucrats in these entities to become increasingly reliant on technical accounting information. Concepts of contestability for funds, measurability of outputs and accountability for performance have been central to the public sector reform agenda (Lane, 1997). Both government oversight bodies and professional accounting bodies continue to issue technical accounting and financial management directives and guidelines. More generally, the convergence of public and private sector accounting practices and the advancement in information technology means that accountants are increasingly called upon to operate as managers of business value and agents of change in their organization (Sharma, 1998). Such a continuing trend would suggest that qualified accountants employed within the management of public sector entities have assume a substantial leadership role in knowledge creation, sharing and directing within their organization. Individuals or groups within an organization who take on this role are referred to by Krogh et al. (1997) as 'knowledge activists'.

Yet, there is a lack of systematic evidence about the nature and extent of the leadership role played by senior accountants as knowledge activists and whether this phenomenon is an integral part of the on-going implementation of public sector 'managerialism' and 'commercialisation'. There is also a lack of empirical research into the organizational conditions that might support accountants' knowledge activism. To investigate these matters, a field survey has been conducted amongst members of CPA Australia who hold accounting or financial management positions in public sector entity at federal, state or local government level.

The objectives of this study are:

- To operationalize the concept of 'knowledge activism';
- To describe the extent that CPAs are engaged in knowledge sourcing, connecting and directing activities in entities at federal, state or local government level;
- To explain the effects that conditions of 'organisational information consciousness' and 'organisational accountability orientation' have on the knowledge activism levels.

LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

Knowledge Management and Knowledge Activism

As indicated in the introduction, the demands on accountants in the public sector have changed following financial reforms and broadened accountability requirements at federal, state and local government levels in Australia. The first stage of this study is to seek evidence on the nature and extent to which CPAs in public sector organizations are currently engaged in knowledge sourcing, connecting and directing activities in their organization - i.e., knowledge activism.

Knowledge is a broadly used term. In the professional literature, knowledge is a notion of adding value to information by processing it, developing profiles of information users and providing technologies so that people can get the information when they need it (Foy, 1999).

It also fosters an organizational environment of knowledge management, where management and professional staff share information and synthesize it to create new knowledge. Knowledge management involves both controlling information and enabling knowledge - i.e., adding value to information (Foy, 1999)

While one branch of the knowledge management literature focuses on the accumulation, transformation, protection and valuation of intellectual capital in achieving competitive advantage (e.g., Dzinkowski, 2000), a second branch addresses directly the 'everyday management' of knowledge itself. It is concerned with the more detailed knowledge-related activities of an organization in the facilitation of the capture, flow, transformation and use of knowledge (Lee, 2000). More particularly, the second branch is concerned with the different activities engaged in by management and professional staff to enable 'tacit' and 'explicit' information to shape the knowledge content. Tacit knowledge is more difficult to formalize and communicate to others. It is embedded wisdom, ideas and know-how of individuals, making it difficult to extract and share (Lee, 2000).

Knowledge activism is a concept that embraces practices studied in this second branch of the knowledge management literature, particularly activities relating to the extraction and sharing of tacit knowledge. Von Krogh et al. (1997) suggest that knowledge activists are about enabling knowledge, not controlling it. They need to be sensitive to the knowledge management processes of each micro-community in their organization. Implicit in the knowledge activist role are social embeddedness and exchange concepts.

Knowledge activism is said by Von Krogh et al. (1997) to involve three roles: First, the activist is a driver of knowledge creation in an organization. CPAs in senior positions in public sector entities will be in a position to network with policy-makers and regulators in public sector oversight bodies. They will also be able to tap into relevant debates and proposals arising in the accounting profession. With this sourced information, they become knowledge catalysts for their organization when management ideas and advice are needed in implementing areas of reform in their organisation such as output-based accrual budget setting and reporting, various dimensions of accountability reporting, audited performance indicator and heritage/ infrastructure asset valuation.

Second, the activist is a connector of knowledge creation initiatives. Connector activities are of paramount importance to an organization and involve the linking of "microcommunities" of knowledge to achieve "shared maps of cooperation", according to Von Krogh et al. (1997). Microcommunities are small groups involved in knowledge sharing, concept creation and concept justification throughout the organization. In the environment of the 'new public sector' with continuing pronouncements, guidelines and discussion papers being generated by Government Treasury, the Office of Auditor-General and the professional accounting bodies, CPAs will be in a heightened position to initiate the dissemination of this information to relevant parts of their organisation and, in the process, to generate "shared maps of cooperation". These maps can take the form of implicit (or explicit) project management tools showing the participation, budgets, milestones, goals and time-frames for introducing new or modified guidelines, standards and regulations that impact on management information systems, financial reporting and corporate governance. Even more importantly, CPAs are in a position to extend their "connector of knowledge" role beyond the application of regulatory and professional changes to the creation of new concepts and issues, together with their

justification process, that are being considered amongst microcommunities within the organization.

Third, the activist is a “merchant of foresight”, who provides a vision or overall direction to the knowledge sharing occurring in microcommunities. According to Nonaka and Takeuchi (1995), “a knowledge vision should define the ‘field’ that gives corporate members ... a general direction as to what kind of knowledge they ought to seek and create.” In working with management in the organization as a catalyst in the introduction of new and amended public sector regulations, systems or professional standards, and in working with microcommunities in the organization as a connector of knowledge creation initiatives, senior/top CPAs could also fulfill the knowledge activist’s role of detecting how these initiatives throughout the organization could change its strategic position. Von Krogh et al.’s (1997) ‘merchant of foresight’ is a person or group who will “have to challenge the participants on their contribution to the (knowledge) vision and suggest how they might adjust their work to fit better with the vision.” (p. 479)

Organisational Information Consciousness and the Activities of Knowledge Catalyst and Knowledge Connector

The second stage of this study considers the organizational influences and conditions that need to be present in order to encourage the greater engagement of CPAs in knowledge activism roles in their public sector entity. The first concept identified as a determinant of knowledge activism of CPAs is “information consciousness” created within their organisation. Drawing from the literature on knowledge management, Brown and Starkey (1994) relate this concept to an organisation’s attitudes towards valuing information as a resource and the consequent processes of making information available amongst that organisation’s managerial and professional staff. They argued that the core of an organisation’s “information consciousness” processes is the extent to which the organisation provides resources and incentives that facilitate and encourage the appropriation of knowledge by individual professional workers from external and internal sources. At this individual level, Shapero (1985) drew an analogy between knowledge and organic life. He referred to “nutrient information” as the information that furnishes nourishment, or promotes growth and repairs the natural wastage, of an individual’s knowledge base.

When knowledge of individuals is made explicit it can be shared orally or in written/pictorial form with others and becomes knowledge at the “group” level. When individual or group knowledge is appropriated by the organisation (e.g., in establishing standard operating procedures, internal databases, or training manuals), it is referred to as knowledge at the organisational or inter-organisational level (Mouritsen, 1998; Sullivan, 1998).

This study seeks to develop measures of “information consciousness” applicable at the individual level and the group level of knowledge management. At the individual level, the sustaining of “nutrient information” by CPAs working in senior or top positions of public sector entities would be dependent on the CPAs information sourcing from catalysts, particularly from external professional or regulatory oversight-body sources. At the group level, the explicit sharing of knowledge by the CPA with a range of other relevant parties during the process of preparing the entity’s annual report and annual budget would be reflected in the organisation’s requirements for annual report preparation inclusiveness.

Information sourcing from catalysts

Barlett and Goshal (1995) argue that accountants, as professionals, must treat their personal development and knowledge as being of primary importance. They contend that organizations must provide professional workers with the opportunity for continuous skills updating and access to up-to-date information and developments on their field of expertise. The failure to do so can lead to their deficiency in facilitating the organisation's growth of knowledge through the connection of latest thinking into other parts of the organization.

Encouragement and support by public sector entities for external information sourcing by their accountants from relevant public sector oversight and regulatory bodies, as well as from professional bodies, is deemed to be an important element of a public sector organisation's information consciousness. Such external bodies (e.g., State and Federal Treasury, Office of the Auditor-General, Australian Taxation Office, Ministry of Local Government, Australian Accounting Standards Board, and the Public Sector Special Interest Group of CPA Australia) raise issues, generate discussion papers, give examples of best practice and impose regulations and standards relating to a wide range of financial management and reporting matters. From an individual public sector entity's viewpoint, these bodies represent knowledge catalysts in terms of the on-going ideas, proposals, pronouncements and instructions they generate. The variable, information sourcing from catalysts, will be measured in this study by the extent to which the senior/top CPAs in public sector entities are able, as part of their work, to maintain regular access to expert outside information, particularly from sources within the public sector and the accounting profession.

In summary, it has been argued that the motivation by senior/top CPAs to access externally-generated technical and professional information is not only to renew their own "nutrient information", but also to be a more effective conduit for knowledge catalyst activities in their organization.

This leads to the proposition that the extent of technical and professional information accessed from external 'knowledge catalysts' by CPAs working in the public sector, affects the CPAs participation in 'knowledge connector' activities in their organization. Without these information sourcing opportunities and the capacity to pursue them, CPAs will be in a weakened position to share their knowledge (i.e., act as a connector) in their organization. It is hypothesized that:

H1: There is a positive relationship between knowledge sourcing by senior/top CPAs from catalysts in external government oversight and professional bodies and the extent of their knowledge connector activism in their public sector organisation.

Annual report preparation inclusiveness

The approach to the preparation of annual financial reports and annual budget estimates of public sector entities has undergone fundamental change in Australia due to the adoption of public sector accounting standards and the changed expectations of government oversight bodies on accountability reporting. In the 1990s, the accounting profession in Australia brought about a fundamental shift in the approach to financial reporting by public sector entities with the issue of three accounting standards: AAS 27 "Financial Reporting by Local Governments",

AAS 29 “Financial Reporting by Government Departments” and AAS 31 “Financial Reporting by Governments”. The last one was issued in 1996.

Building on these accounting standards, and responding to the changing focus of accountability towards managerial accountability, Australian governments at Federal and State levels have now introduced a more fully integrated annual reporting approach for annual budgets, financial reports and performance indicators. In Western Australia, where data for this study was collected, the State Treasury’s Financial Reform Division has been driving the phase-in of accrual output-based budgeting and financial reporting since 1997. Under this reporting framework, any entity receiving appropriation from State consolidate revenue must publish in its annual reports, in addition to its financial statements under AAS27 or AAS29, an outputs and appropriation summary (accrual basis and cash basis segmented by outputs), performance measures (both efficiency and effectiveness) for each group of outputs, and a capital statement. The implementation of this new reporting regime gives rise to several complex technical issues, such as the full accrual costing of outputs, capital user charges associated with the entity’s use of net assets, the accounting treatment of accumulated employee entitlements, and the suitable choice of output performance measures. As a result of these reporting changes, there is likely to be a greater need by senior bureaucrats to seek the specialist knowledge of CPAs and a greater demand on CPAs to obtain the inputs of a wider group of parties when preparing these broader-scoped and more integrated annual reports of their entity.

Taylor & Rosair (2000) found that the influence on the shaping of annual reports of government departments statistically factored together for four types of users - the Treasury, lobby groups, the Minister and the CEO. These four users were labelled “participating parties” because they were likely to be able to directly demand accountability-based information about the government department in which they participate.

In this study, the variable, annual report preparation inclusiveness, is established as a measure of the extent to which the senior/top CPA actively engages with, and systematically considers, the interests of various “participating parties” in the entity’s annual report preparation process. This engagement of the interests and demands of various parties is another important element of the entity’s information consciousness.

The proposition flowing from this discussion is that the extent of inclusion of the interests of various “participating parties” in the annual report preparation process of the organization affects the strength of on-going knowledge connector activities by CPAs in their organization. A lack of organizational encouragement or support for participation in the annual report preparation process would reflect a working environment for the CPA in which organizational information consciousness is limited and, in turn, a less conducive environment for the CPA to act as a knowledge connector amongst microcommunities in the organization. It is hypothesized that:

H2: There is a positive relationship between annual report preparation inclusiveness and the extent of senior/top CPAs’ knowledge connector activism in their public sector organization.

ACCOUNTABILITY EMPHASIS GIVEN BY THE ORGANISATION

Central to the senior/top CPA's role of 'knowledge connector' will be engagement with those microcommunities where concept creation, concept justification, prototype development and cross-levelling of knowledge throughout the organization is able to occur. (von Krogh et al., 1997) However, the organization's work environment could have situational constraints that impact on a senior/top CPAs role as a knowledge connector. Constraints relating to the discharge of accountability have particular importance for CPAs working in public sector. To be an effective enabler of knowledge connection activities, the activist's ability to discharge his or her own accountability should not be constrained by job ambiguity in terms of authority over resources, identification of persons accountable to, or understanding of agreed goals. The broad accountability orientation of the organization - whether systems and procedures are focused on ensuring compliance/stewardship or efficiency/effectiveness - could also impact on the senior/top CPA's ability to be effective as a knowledge connector.

Role conduciveness for accountability discharge

CPAs in top and senior positions in their organization would be expected to have a leadership role in relation to the appropriate discharge of public and managerial accountability by their organization. But fulfillment of this type of leadership role by the CPA will be conditional on having job elements that are conducive to effectively carrying out this accountability-discharge. These job elements for the public sector CPA might include: (1) formal authority over use of resources in his or her area of responsibility, (2) identification of those to whom he or she is accountable, and (3) understanding of expected achievements based on agreed goals.

Senatra (1982) provided evidence from an accounting firm that supported the contention that the difficulties accountants have with their organizational roles increase as conflict and ambiguity increase. Viator (2001) further studied roles and stress in accounting firms and suggested that ambiguity or conflict in roles relating to matters of accountability, deters the participation of accountants in sharing relevant ideas and information.

This study contends that the extent of CPAs in knowledge activism in their organization will be affected by the conduciveness of their work environment to the discharge of accountability. Key work elements conducive to accountability-discharge include the extent of clarity in authority over use of resources, the extent of identify of those to account to, and the extent of understanding of goals to be achieved. It is hypothesized that:

H2: There is a positive relationship between the senior/top CPA's role conduciveness towards the discharge of public and managerial accountability and the extent of their knowledge connector activism in their public sector organisation.

Accountability emphasis in systems and procedures

Public sector entities are likely to have different accountability emphasis or focuses underlying information systems and procedures. The nature of accountability is multifaceted and has been changing. In broad terms, accountability was previously concerned with "probity, compliance and control as opposed to the present focus on efficiency, effectiveness and cost savings" (Ogden, 1995, p198). A similar reflection on the changing focus of accountability is given by Parker and Gould, 1999, p.110-111:

Public sector management has been transformed from being administrators and custodians of resources to being accountable managers empowered with greater delegated authority... The greater decision-making authority and flexibility accorded to managers has been accompanied by a required results-emphasis. Thus accountability for processes, equity and access have given way in large measure to accountability for outcomes, preferably measured in quantitative and particularly financial terms.

Taylor and Pincus' (1999) specify two primary focuses of accountability - fiduciary and managerial. As explained by Taylor and Pincus (1999), "fiduciary accountability" is a focus that has grown out of the traditions of stewardship of public funds and custodianship of public assets. It focuses on legality and professional compliance. Systems and procedures relating to compliance with matters of legality and regulation, as well as proper stewardship of public funds and custodianship of public assets, are associated with facilitating the discharge of "fiduciary accountability".

In contrast, "managerial accountability" is a focus that has grown out of the more recent "managerialism" and "new public management" reform movements. Managerial accountability, according to Taylor and Pincus (1999) focuses on the evaluation of top and senior managers' effectiveness in setting and achieving output targets and managing resources efficiently. Systems and procedures relating to economy and efficiency in the use of available funds and other resources in generating outputs, as well as the specification and monitoring of the effectiveness of achievements against targets or predetermined outputs and outcomes, are associated with facilitating the discharge of "managerial accountability".

It is hypothesized that the emphasis of the organisation towards managerial accountability will require top and senior managers to have a more sophisticated understanding of financial and non-financial measured and data analysis generated through their entity's management information system. Emphasis on this type of accountability is likely to make management more interested in seeking advice and briefings from CPAs in senior/top positions in the organization, and thereby developing an organizational environment that seeks a knowledge connector role from the CPA. It is hypothesized that:

H4: There is a positive relationship between the accountability emphasis of a public sector entity towards managerial accountability and the extent of senior/top CPAs' knowledge connector activism in their public sector organisation.

CONCEPTUAL MODEL

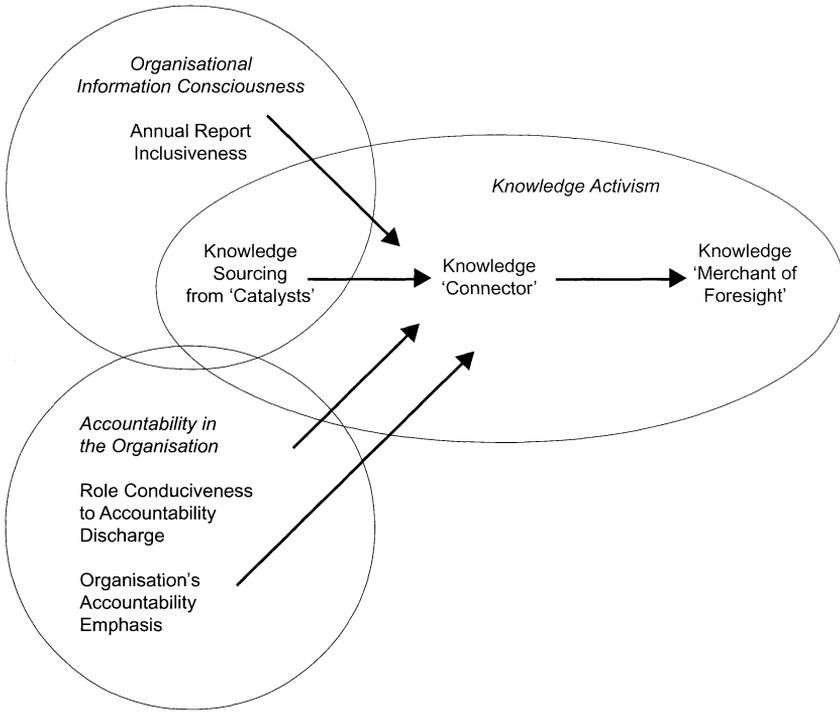
A depiction of the effects of organizational information consciousness and accountability in the organization on knowledge activism is presented in Figure 1. Within the three dimensions of knowledge activism are linearly related. This study models the second dimension of knowledge activism (i.e., 'knowledge connector') as the dependent variable. The first dimension, 'knowledge sourcing from catalysts' is treated as an independent variable.

METHOD

Sampling and Data Collection

The scope of the evidence provided in this study is limited to subjects employed in Western Australia. Nevertheless, within Western Australia, it was still possible to sample a cross-section of subjects employed in 'budget-funded' and 'commercialized' entities at federal, state and local government levels.

Figure 1
Conceptual Model of Knowledge Activism and its Determinants



Data was collected through a field survey, using a mail questionnaire approach. Piloting of the questionnaire was undertaken on all members of CPA Australia's Public Sector Interest Group (WA), and some revisions were made prior to the its full administration. The sample selection for the survey used in this study was drawn from the members' list of CPA Australia's Western Australian Division. From this membership database, all those who specified their current employer to be in the public sector were extracted. Then 100% of those who specified their current level of appointment to be at a senior level or above (i.e., the equivalent of Public Service Grade 6 or above) were included in the sample. In total, there were 518 questionnaires distributed. Since CPA Australia supported this survey, the questionnaire was distributed to their members under their letterhead. Useable responses totalled 270 (a 52.1% response rate).

Validity and Reliability Tests for Variables from the Questionnaire Data

A validity test was undertaken using principal components factor analysis on the items that relate to each of the five variables contained in the above hypotheses. The scales used for the variables, knowledge connector activities and role conduciveness for accountability disclosure were not drawn from previously tested variables in the literature because of a lack of survey-based empirical research specific to these concepts. The items chosen to measure these variables arose from a focus group session held with five members of CPA Australia's Public Sector Interest Group (WA) about the applied nature of these two concepts.

The other variables used in this study have been adopted, but not replicated, from previously validated measures. Thus, information sourcing from catalysts selects from Taylor et al's (2002) measures of the accountant's extent of accessing through formal and informal channels, external sources of regulatory, technical and professional information. The annual report preparation inclusiveness variable is a modified version of Taylor and Rosair's (2000) "participating parties' interests in accountability disclosures. The accountability emphasis of systems and procedures variable is a modified version of Neilson and Taylor's (2001) "accountability focus of local governments" variable.

Table 1 shows that the factor loadings for each of the multiple-items measures of the variables in this study. For each separate variable in Table 1, items that did not load onto Factor 1 were eliminated from the measure in order to preserve its internal validity. The right-hand column in Table 1 shows reliability test results for each variable arising from the survey data. A variable is considered as reliable if the Cronbach alpha is both positive and greater than 0.6. To measure each variable in Table 1, the mean was taken of the scores of the items related to each variable. One exception to taking the mean of the items was the measurement of the variable, accountability emphasis of systems and procedures. An index was constructed from the four items as follows:

Accountability Emphasis Index = (efficiency + effectiveness) / (compliance + stewardship)

A score of above 1 reflects a managerial accountability emphasis, whereas below 1 reflects a fiduciary accountability emphasis.

Table 1
Validity and Reliability Tests of Variable Measures

Variables and their items	Factor Loading on factor 1	Eigen-value & (% var. explained)	Cronbach alpha
n=270			
KNOWLEDGE CONNECTOR ACTIVITY		4.251	.891
Training of senior work colleagues on general and specific changes to accounting, budgeting, etc.	.721	(60.73%)	
Advice or briefings to management on:			
- accrual accounting concepts and methods	.833		
- technical aspects of TIs, output-based mgt etc	.800		
- aspects of AAS27/AAS29/AAS31	.749		
- emerging accounting issues	.826		
- needed changes in design of systems	.760		
- audit requirements/findings	.758		
INFORMATION SOURCING FROM CATALYSTS		5.045	.741
Direct liaison with Treasury officers (not GTEs/ Local Govt)	.729	(63.06%)	
Regular reference to Treasury literature (not GTEs/ Local Govt)	.691		
Direct liaison with Office of Auditor-General or external auditors	.613		
Use of CPA Australia library	.585		
Regular reference to professional literature	.677		
Informal networking with other accountants in public sector	.689		
Attendance at training courses, conferences etc	.722		
ANNUAL REPORT PREP'N INCLUSIVENESS		3.330	.620
Parties having a direct or indirect influence on the process of preparing the annual report and financial statements:		(55.51%)	
- Office of Auditor General or external auditor	.527		
- Treasury Department or Dept of Local Govt (not for GTEs)	.617		
- Lobby groups or community interest groups	.521		
- Relevant Minister, Mayor or Chair of Board	.705		
- Chief Executive Officer	.775		
- Other Senior Managers	.714		
ROLE CONDUCTIVENESS TO ACC'ABILITY		1.926	.721
Formal authority over your use of resources	.832	(64.19%)	
Identification of those you are accountable to	.829		
Expected achievement of agreed goals	.739		
ACC'ABILITY EMPHASIS OF SYS & PROC.		2.404	.771
Compliance with legal and regulatory matters	.776	(60.11%)	
Stewardship of public funds and assets	.829		
Efficiency in use of resources to generate outputs	.783		
Setting and achieving target, outputs and outcomes effectively	.709		

RESULTS AND DISCUSSION

Demographic Profile of Respondents

Details of the spread of these 270 responses between types of public sector employer organisations and between individuals' demographic profiles are presented in Table 2.

Table 2
Demographic Profile
CPA Australia Members in Top and Senior Levels of the Public Sector

Description (N=270)	Top Level No. / (%)	Senior Level No. / (%)	Total No. / (%)
Age:			
Less than 30	1 (1.0)	11 (6.3)	12 (4.4)
30 - 45	31 (33.0)	91 (51.7)	122 (45.2)
Over 45	62 (66.0)	74 (42.0)	136 (50.4)
Gender:			
Male	87 (92.6)	155 (88.6)	242 (90.0)
Female	7 (7.4)	20 (11.4)	27 (10.0)
Years in the Public Sector:			
Less than 2 years	-	-	
2 - 5 years	14 (14.9)	24 (13.6)	38 (14.1)
6 - 15 years	50 (53.2)	132 (75.0)	182 (67.4)
More than 15 years	30 (31.9)	20 (11.4)	50 (18.5)
Proportion of Accounting Work:			
Less than 20%	56 (59.6)	56 (32.0)	112 (41.6)
More than 20% & less than 50%	25 (26.6)	56 (32.0)	81 (30.1)
More than 50%	13 (13.8)	63 (36.0)	76 (28.3)
Organisation Type:			
Govt Dept/Non-Commercial			
Stat. Auth. or Trust	40 (44.0)	113 (64.6)	153 (57.5)
Local Government Municipality	24 (26.4)	18 (10.3)	42 (15.8)
GTE/Commercial Stat.Auth.	27 (29.7)	44 (25.1)	71 (26.7)
Organisation Size (no. employees):			
Less than 50	25 (26.6)	24 (13.8)	49 (18.3)
50 to 200	25 (26.6)	50 (28.7)	75 (28.0)
201 to 500	19 (20.2)	22 (12.6)	41 (15.3)
More than 500	25 (26.6)	78 (44.8)	103 (38.4)

Table 2 reveals that, at the top level (i.e., public sector SES grade or above), a traditional career profile continues to exist with 66.0% over 45 years of age, 92.6% male and 31.9% having more than 15 years in the public sector. When cross-tabulations are computed for specific groups employed at the top level, the following features are revealed:

- Of the 7 (7.4%) of females at the top level, 3 are in government departments, one is in local government and 3 are in government business enterprises (GBEs). Two are at the top level of organisations with over 500 employees.
- All 27 respondents at top level of GBEs/Commercial Agencies spend less than 20% of their time in “accounting” tasks. In contrast, only 5 out of 24 respondents at top level in local government spend less than 20% of their time on “accounting” tasks.
- Of the 14 (14.9%) at the top level who have been employed in the public sector for 5 years or less, 3 are in government departments (of which one is in a government department employing over 500 people), 6 are in local government, and 5 are in GBEs/commercial agencies (of which 2 are in a GBE employing over 500 people).

At the senior level (i.e., Grades 6 to 9), 6.3% are less than 30 years of age, 88.6% are male and 52.8% have more than 15 years in the public sector. Interestingly, only 36.0% at the senior level and 13.8% at the top level say they are engaged in “accounting” types of tasks for more than 50% of a typical month of work. Again, cross-tabulations for specific groups within the senior level are computed to reveal the following features:

- Of the 20 (11.4%) of females at the senior level, 15 are in government departments/non-commercial agencies, 3 are in local government and 2 are in GBEs/commercial agencies. Of these 20 females at the senior level, 9 are in entities that employ over 500 employees, and 4 spend more than 50% of their time on “accounting” tasks.
- Of the 56 (32.0%) who spend less than 20% of their working time doing “accounting” types of tasks, 38 are in government departments/non-commercial agencies, one is in local government and 17 are in GBEs/commercial agencies.

Description of ‘Knowledge Connector’ Activities by CPAs in Top and Senior Positions

To take a leadership role in their organisation’s knowledge connector activities, CPAs in top and senior positions would be directly involved in the process of making new technical information and innovative ideas more widely available in the organisation. They were asked in the questionnaire about the extent to which they participated in the training or giving advice or briefings to senior and middle management in their organization on emerging and recent issues, ideas, methods, guidelines or requirements arising from regulatory and oversight bodies or the accounting profession. The results are given in Table 3.

Table 3
Extent of Knowledge Connector Activities of CPAs

Description	N	Mean Frequency of undertaking the activity: 1 = never, 5 = very often	Between Group Differences Of Means	
			F Ratio	F Prob
1. TRAINING: Helping in the training of middle and senior management within your organization about changes to accounting, budgeting, performance measures or financial reporting.				
ORGANISATION TYPE				
Govt Dept/Non-Commercial	153	3.32		
Local Govt	42	4.00	3.757	.025*
GTE/Commercial	71	3.46		
ORGANISATION SIZE				
Less than 50	49	3.39		
50 to 200	75	3.51		
201 to 500	41	3.68	.602	.614
More than 500	103	3.37		
LEVEL OF POSITION				
Top Level	94	3.51		
Senior Level	175	3.42	.297	.586
GENDER				
Male	242	3.11		
Female	27	3.50	2.052	.153
2. ACCRUAL ACCOUNTING: Giving advice or briefings to management, the Minister, or the Board on accrual accounting related concepts or methods.				
ORGANISATION TYPE				
Govt Dept/Non-Commercial	153	2.97		
Local Govt	42	3.63	4.472	.012*
GBE/Commercial	71	2.79		
LEVEL				
Top Level	94	3.09		
Senior Level	175	2.97	.449	.504
GENDER				
Male	242	2.78		
Female	27	3.04	.868	.352
3. TREASURY PUBLICATIONS: Giving advice or briefings to management on technical aspects of Treasury publications or TIs relating to Output based Management, Performance Indicators, Accrual Budgeting, etc.				
ORGANISATION TYPE				
Govt Dept/Non-Commercial	153	3.20		
Local Govt	42	Not Relevant	3.858	.006**
GTE/Commercial	71	2.50		
LEVEL				
Top Level	94	2.44		
Senior Level	176	2.69	2.054	.153
GENDER				
Male	242	2.33		
Female	28	2.64	1.247	.265

4. AAS27/AAS29/AAS31: Giving advice or briefings to management on aspects of these public sector accounting standards

ORGANISATION TYPE

Govt Dept/Non-Commercial	153	2.28		
Local Govt	42	2.58	2.776	.051*
GBE/Commercial	71	Not relevant		

LEVEL

Top Level	94	2.07		
Senior Level	176	2.30	1.911	.168

GENDER

Male	242	2.00		
Female	27	2.25	890	.346

5. EMERGING ISSUES: Giving advice or briefings to management on other emerging accounting issues, eg. valuation of infrastructure assets, cost allocations to outputs, capital user charge.

ORGANISATION TYPE

Govt Dept/Non-Commercial	154	2.73		
Local Govt	43	3.20	1.809	.166
GBE/Commercial	71	2.81		

LEVEL

Top Level	94	2.93		
Senior Level	176	2.75	1.166	.281

GENDER

Male	242	2.63	.	
Female	27	2.84	590	.443

6. DESIGN: Giving advice or briefings to management on changes in design of accounting systems or internal auditing/controls.

ORGANISATION TYPE

Govt Dept/Non-Commercial	153	3.02		
Local Govt	43	3.83	4.846	.009**
GBE/Commercial	71	3.23		

LEVEL

Top Level	96	3.00		
Senior Level	174	3.28	2.447	.119

GENDER

Male	242	2.96		
Female	27	3.22	.768	.382

7. AUDITOR: Giving advice or briefings to management on any changes in the Auditor-General's or other external auditor requirements and on the auditor's findings

ORGANISATION TYPE

Govt Dept/Non-Commercial	153	2.47		
Local Govt	42	3.71	10.188	.000**
GBE/Commercial	71	2.82		

LEVEL

Top Level	94	2.59		
Senior Level	176	2.81	1.221	.270

GENDER

Male	242	2.59		
Female	27	2.76	.277	.599

Overall, the activity of greatest involvement was helping in the training of managers within their organisation regarding changes to accounting, budgeting, performance measures or financial reporting. This activity had an aggregate mean of 3.436 or between "more than occasionally" and "quite often". The least participation was recorded for the activity of giving advice or briefings to management on aspects of AAS27, AAS29 or AAS31. This activity would only have been relevant to government departments. However, for CPAs working in government departments, the mean was quite low at 2.436 (or between "occasionally" and "more than occasionally").

In terms of significant differences between groups in the frequency of knowledge connector activities of CPAs, Table 3 shows the following results.

- CPAs working in Local Governments are significantly more active in leading the activities of training of others, and giving advice and briefings on accrual accounting, the design of accounting/auditing systems and changes in external auditor requirements.
- CPAs working in Government Departments/Non-commercial agencies are significantly more active in giving advice and briefings to their management on aspects of Treasury publications relating to performance indicators, etc. (mean = 3.20). However, Government Departments /Non-commercial agencies had a low aggregate average of 2.69 on all other areas of giving advice and briefings to management.
- There were no significant differences in the knowledge connector activity level of CPAs on the basis of their level of position or their gender.

Tests of Hypotheses

The multiple regression model to be used to test the relationships specified in H1 to H4 is specified as:

$$KCONNECTOR = a + b_1 SOURCE + b_2 INCLUSIVE + b_3 ACCROLE + b_4 EMPHASIS + e$$

where KCONNECTOR is Knowledge Connector Activity
 KSOURCE is Information Sourcing Activity from External Catalysts
 INCLUSIVE is Annual Report Preparation Inclusiveness
 ACCROLE is Role Conduciveness to Accountability Discharge
 ACCEMPHASIS is Accountability Emphasis of Systems and Procedures

This multiple regression model was first run with the inclusion of the dummy variables ORGTYPE, JOBLEVEL and GENDER, in order to consider whether these control variables had a confounding effect on the hypothesized relationships. Table 4 shows that each of the control variables of organization type of the respondent, level of position of the respondent and gender of the respondent has a non-significant regression coefficient with the dependent variable. Based on this result, further analysis for purposes of hypotheses testing would not be confounded by the elimination of these control variables.

Table 4
Regression Results for the Effects of Test and Control Variables on
Knowledge Connector Activities of CPAs

Model Summary

R	R Square	Adjusted R Square	Std. Error	F	sig
.628	.394	.378	.8375	23.538	.000

Coefficients

	Std. Error	Standardized	t	Sig.	Collinearity	Statistics
		Coefficients			Tolerance	VIF
(Constant)	.567		-3.651	.000		
KSOURCE	.075	.508	10.053	.000	.936	1.069
INCLUSIVE	.082	.181	3.570	.000	.928	1.077
ACCROLE	.085	.098	1.875	.062	.881	1.135
ACCEMPHASIS	.207	.096	1.954	.052	.992	1.008
ORGTYP	.114	.069	1.348	.179	.905	1.105
JOBLEVEL	.060	.015	.298	.766	.978	1.022
GENDER	.172	.044	.889	.375	.978	1.022

Dependent Variable: KCONNECTOR

Table 5 presents the effects the organizational information consciousness components of KSOURCE and INCLUSIVE and the accountability emphasis components of ACCROLE and ACCEMPHASIS on the extent of knowledge connector activity (KCONNECTOR) of top and senior CPAs in their public sector entity. The explanatory power of the regression equation is seen to be satisfactory (i.e., an adjusted R-squared of .383 and an F significance of .000). Multicollinearity amongst the independent variables was not a problem (i.e., the tolerance and variables inflation factor (VIF) are close to 1) for each independent variable.

Turning to the results of relative influences on KCONNECTOR, as shown Table 5, three significant positive relationships are revealed - KSOURCE, INCLUSIVE and ACCEMPHASIS. Relative to these three variables, ACCROLE is not found to be a significant determinant of KCONNECTOR at the 5% significance level. Hypotheses 1, 2 and 4 are accepted, whereas hypothesis 3 is rejected. These findings are discussed in turn.

First, as shown in Table 5, the strongest positive relationship to knowledge connector activities is the information sourcing from external catalysts. This result suggests that the CPA's extent of linking and regularly access to external information sources within the wider public sector and the accounting profession has a strong effect on the extent of that CPA's engagement in training, advising and mentoring activities in his or her entity - i.e., the CPA's effectiveness in sourcing information on the latest required and emerging accounting techniques, measures, disclosures and systems design is a strong determinant of the CPA prominence as a knowledge connector. This external information sourcing ability of the CPA is part of the wider notion of the organization's degree of 'information consciousness'.

Table 5
Regression Result for the Effects of Organisational Information Consciousness and
Accountability Emphasis on Knowledge Connector Activities of Public Sector CPAs

Model Summary

R	R Square	Adjusted R Square	Std. Error	F	sig
.626	.392	.383	.8349	42.118	.000

Coefficients

	Std. Error	Standardized	t	Sig.	Collinearity	Statistics
		Coefficients			Tolerance	VIF
		Beta				
(Constant)	.463		-3.593	.000		
KSOURCE	.073	.514	10.460	.000	.964	1.037
INCLUSIVE	.079	.194	3.893	.000	.944	1.059
ACCROLE	.081	.085	1.706	.089	.994	1.006
ACCEMPHASIS	.205	.095	1.958	.051	.937	1.067

Dependent Variable: KCONNECTOR

Second, annual report preparation inclusiveness (INCLUSIVE) is very significantly related to the extent of the CPA's knowledge connector activities. Thus, it is found that KCONNECTOR is affected by this second component of the entity's 'information consciousness'. That is, 'information consciousness' is deemed to be higher when the annual report preparation process involves a greater degree of direct consultation with, and consideration of, the interests and demands of parties within the entity's top management and elected officials, the public sector oversight bodies and the active community groups.

Turning to the notion of the organisation's 'accountability emphasis', the extent to which the individual role of the CPA is conducive to the discharge of public accountability is not significantly related to KCONNECTOR. Thus, within an entity's work environment, the ambiguity in the CPA's authority over resources, identity of accountors and expectations of achievements was not a factor that significantly impacted on the CPA's knowledge connector activities.

Finally, it is found that the accountability emphasis of the entity's systems and procedures (ACCEMPHASIS) is moderately significantly related to KCONNECTOR. The result in Table 5 indicates that the greater the entity's emphasis towards managerial accountability (i.e., efficiency in use of resources to generate outputs and effectiveness in setting and achieving outputs and outcomes) relative to fiduciary accountability (i.e., compliance with legal and regulatory matters and stewardship of funds and assets), the more frequently the CPA engages in knowledge connector activities.

While the third dimension of knowledge activism - 'Merchant of Foresight' - was not hypothesized as having a direct relationship to the organisation's information consciousness

or accountability emphasis, Table 6 provides results of such a relationship. The results are similar to those in Table 5. Thus, KSOURCE, INCLUSIVE and ACCEMPHASIS are significantly positively related to KCONNECT and KFORESIGHT respectively.

Finally, to complete the analysis, evidence was provided of a positive link between KSOURCE and KCONNECT, but evidence was not given about the third dimension in the chain of knowledge activism, KFORESIGHT. It is found that the Pearson Correlation Coefficient between KCONNECTOR and KFORESIGHT = .253 (sig. .000). This completes the evidence of a linear relationship in the knowledge activism chain.

Table 6
Regression Result for the Effects of Organisational Information Consciousness and Accountability Emphasis on 'Knowledge Merchant of Foresight' Activities of Public Sector CPAs

Model Summary

R	R Square	Adjusted R Square	Std. Error	F	sig
.378	.143	.129	9052	10.166	.000

Coefficients

	Std. Error	Standardized Coefficients	t	Sig.	Collinearity	Statistics
		Beta			Tolerance	VIF
(Constant)	.535	.	304	.761		
KSOURCE	.082	.192	3.179	.002	.962	1.040
INCLUSIVE	.089	.202	3.309	.001	.946	1.058
ACCCROLE	.090	.101	1.648	.101	.929	1.076
ACCMPHASIS	.094	.148	2.469	.014	.976	1.025

Dependent Variable: KFORESIGHT

CONCLUSION

The purpose of this study has been to provide preliminary evidence about the nature of a crucial element of knowledge activism - i.e., knowledge connector activities - undertaken by professional accountants (members of CPA Australia) employed at a senior/top level of their public sector organization. Having developed a measure for KCONNECT, its key determinants were investigated. These determinants were adopted from concepts in the literature on knowledge management and accountability or created from the opinions of a focus group of public sector CPAs.

This study has provided evidence of a strong influence of components of the entity's 'information consciousness' on the CPA's extent of involvement in knowledge connector activities amongst microcommunities of senior members within his or her public sector organisation. There is also evidence of the influence of the entity's 'accountability emphasis' on this activity, but it is less convincing.

These findings are subject to a number of limitations. The scales devised for the measurement of each of the variables have not previously been established or validated in prior studies. Reliance on only one focus group and substantial modifications to measures from prior studies by this same author does leave doubts about the construct validity of the variables in this study. The questionnaire data is also subject to the limitations of self-rating, close-questions and the presence of acquiescence bias and halo effect by the respondents. Moreover, the fact that public sector entities at federal, state and local government levels were contained in the sample could have caused different groups of respondents to interpret the questions in the survey instrument from different perspectives.

The following are some considerations for future research:

- Because of the lack of prior empirical research relating to the concept of knowledge connector by professionals and its determinants, there should be replication studies that can re-test and refine the measures in this study.
- Apart from the four independent variables investigated in this study, there are other factors that would represent important elements of an organisation's information consciousness and accountability emphasis.
- Qualitative research could be pursued, including a greater depth of data capture and discovery of meaning at the case level of investigation of knowledge management by accountants in their public sector organization.

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