In Search of the Creative Accountants: An Investigation of Creativity Variation in Regional Accounting Firms

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Abstract

Creativity in accounting has traditionally been perceived negatively; however, with rapid technological advances and globalisation, creativity is increasingly being identified as a necessary skill for the profession. The purpose of this study was to investigate whether the creativity levels of individual accountants and perceptions of their creativity varied across different hierarchical levels and service areas in regional accounting firms. A survey was conducted of professional accountants working in regional Australian accounting firms. Responses were analysed using Multivariate Analysis of Variance. This study found that accountants' creativity and accountants' perceptions of the importance of creativity are significantly related to their perceptions of firm culture; and these relationships are, to some extent, moderated by the hierarchal level of the accountants. This study highlights that to facilitate creativity, accounting firm managers must consider the organisational culture that exists within their firms, and how their higher-level accountants can be involved in facilitating desired cultural shifts. Weak or no evidence was found to support the effects of service area on accountant's creativity and perceptions of creativity.

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INTRODUCTION

The modern-day accountant is no longer simply a 'bean counter'. The modern-day accountant is expected to think critically, understand varied and complex situations, and adapt conventional accounting concepts and principles to those situations (Bewaneh, 2011; Birkey and Hausserman 2019; Briggs et al., 2007; Jones and Abraham 2009). Clients expect their accountants to be flexible and provide a diverse and innovative range of services (Bryant et al., 2011; Telberg, 2003). The modern day economy has been described as 'the age of creativity' (Gerstein and Friedman, 2017) and accountants need to embrace creativity in order to meet these modern-day expectations (AICPA, 2013; Baxter and Kavanagh 2012; Bryant et al., 2011; Maister, 1993).

Creativity can be defined as the 'production of novel and useful ideas' (Amabile, 1996, p. 1). It is often associated with people who are curious, open-minded, self-disciplined, persistent, have a high tolerance of change and ambiguity, and are willing to take risks (Amabile, 1996; Bonetto et al., 2021; Chamaro-Premuzic and Reichenbacher, 2008; Schutte and Malouff, 2020; Shalley et al., 2004). However, creativity is not restricted to these 'innately creative' individuals; all people are capable of creativity given opportunity and the appropriate environment (Amabile, 1996; Birkey and Hausserman 2019; William and Yang, 1999).

Smaller accounting firms located in regional areas are particularly challenged in meeting modern-day expectations. These firms generally have limited resources (such as shortages of appropriately trained employees) and restricted access to clients outside their local area (Kotey and Sorensen, 2014; Sen and MacPherson, 1998; Wines et al., 2013). These firms, arguably, have the greatest need for creativity.

Creativity benefits these firms in many ways. It allows them to engage in more effective decision-making and problem-solving (AICPA, 2013; Park, 1958). It also enables firms to innovate and be responsive to the changing needs of their clients (Amabile, 1996; Shalley et al., 2004). In addition, accounting firms that leverage their employees' creativity are more likely to create unique service offerings, develop innovative solutions to client problems, and constructively challenge outmoded business assumptions (AICPA, 2013; Bierly et al., 2009; Chang and Birkett, 2004; Park, 1958).

Prior research on creativity in accounting firms is scarce, inconclusive and/or conflicting (Bryant et al., 2011; Chang and Birkett, 2004; Hood and Koberg, 1991); it is particularly scarce regarding regional accounting firms. Therefore, this study focused on regional accounting firms. It investigated creativity and perceptions of creativity at different hierarchal levels and between different service areas within these firms. It also addressed the moderating effect of organisational culture. Understanding the influence on these factors is important for guiding behaviour in the accounting profession, as accounting firms and professional bodies continue to grapple with how to effectively facilitate accountants' creativity.

The remainder of this paper is organised as follows. Section 2 discusses factors that are hypothesized to influence accountants' creativity. Section 3 explains the methodology used. Empirical results are presented in section 4. Section 5 discusses the results in relation to each of the hypotheses tested. Finally, section 6 identifies implications and limitations of the research.

INFLUENCES ON CREATIVITY

Existing studies suggest that accountants' creativity can be influenced by factors such as the organisational culture of the firms they work in, the hierarchal level of the individual accountants, and the specific service areas in which they work. This section discusses each of these factors, in turn.

Organisational culture

Organisational culture has been defined as 'the system of shared values and beliefs that develops within an organisation and guides the behaviour of its members' (French et al. 2011, p.339). Organisations can leverage and facilitate employee creativity by developing organisational cultures with behavioural norms and routines conducive to creativity and innovation (Baard and Watts 2007; Lockwood and Walton, 2008; Maister, 1993, McKenna, 2020; Munoz et al. 2021; Yoo et al., 2019). Alternatively, creativity can be stifled by rigid organisational structures which are not supportive of creative and innovative behaviour (Kenny and Reedy, 2007; Martins and Terblanche, 2003; Robbins et al., 2019).

In a business environment, creativity and resulting innovation are associated with flat and/or informal organisational structures, open communication, employee autonomy, supportive collaboration, process-orientated feedback, and enthusiasm for employee capabilities (Amabile, 1996; Baard and Watts 2007; Birkey and Hausserman 2019; Williams and Yang, 1999). Creativity can be achieved by encouraging the abilities and ideas of the employees within an organisation. However, creativity is a personal and introspective process in many individuals and may not be expressed within a group environment (Glaveanu et al. 2019; Williams and Yang, 1999). Consequentially, it is important for businesses to establish an appropriate organisational culture in order that individuals are encouraged to express their creativity.

Organisational culture can be categorised as weak or strong. Organisations have strong cultures when the shared values and beliefs of the organisation are widespread and wellunderstood by employees (French et al., 2011; McKenna, 2020). Weak organisational cultures are characterised by unintegrated and poorly understood values and beliefs. Strong organisational cultures have the greatest impact on employee behaviour and are associated with improved organisational performance and competitive advantage (French et al., 2011; McKenna, 2020; Robbins et al., 2019).

Accordingly, the strength of an organisation's culture and its focus on creativity is expected to affect how accountants express their ideas and originality in their work. The following hypotheses are therefore presented:

> **H1:** Accounting firms with organisational cultures demonstrating strong support for creativity, are significantly positively related to accountant's creativity.
>
> **H2:** Accounting firms with organisational cultures demonstrating strong support for creativity, are significantly positively related to accountant's perceptions of the importance of creativity.

Hierarchal level

The effect of organisational culture on accountants' creativity may vary across hierarchical levels within accounting firms. As employees progress up organisational hierarchies, their fit with the organisation's existing culture becomes increasingly important (Robbins et al. 2019; Wallach 1983). Their progression will slow or stop altogether if there is a significant mismatch between their individual beliefs and values and those of the organisation (Wallach, 1983).

Therefore, if a firm's culture is supportive of employee creativity, there is likely to be an increase in creative individuals in more senior positions within the firm.

Variation in accountants' creativity can also be influenced by changes in what is expected of them as they progress up organisational hierarchies. Chang and Birkett (2004) showed that accountants are expected to be more creative the higher their hierarchical level; and expectations of creativity have been shown to positively correlate with creative performance (Birkey and Hausserman 2019; Tierney and Farmer, 2004). Similarly, existing studies suggest that creativity increases with increased job complexity (Chae et al. 2015; Oldham and Cummings, 1996; Shalley et al., 2004; Tierney and Farmer, 2002) and job complexity is likely to increase in line with hierarchal level. This discussion yields two additional hypotheses:

H3: Hierarchal level, as moderated by firm culture, is significantly related to accountant's creativity.

H4: Hierarchal level, as moderated by firm culture, is significantly related to accountant's perception of the importance of creativity.

Service area

In addition to variations at different levels within the business hierarchy, creativity can vary across accounting service areas. This variation may result from each area developing its own organisational culture (Kirton, 1980; Pratt and Beaulieu, 1992; Wallach, 1983; Wyatt, 2004). For the purpose of this study, accounting work has been separated into four main service areas: financial accounting, taxation, audit, and management accounting.

The main activities of financial accountants are preparing general-purpose or specialpurpose financial statements. Financial accountants must pay due regard to accounting standards, as well as other regulatory requirements such as the Corporations Act and ASX listing rules (Birt et al., 2020).

Taxation services include preparing income tax returns and other tax related documents (such as, activity statements and fringe benefits tax returns); as well as tax planning. Taxation accounting is compliance based, with tax accountants needing a thorough understanding of tax laws and regulations (Hoggett et al. 2020).

Audit is another accounting service area characterised by compliance. An auditor is concerned with applying both auditing standards and ethical standards. For this study, the audit area has been defined as encompassing many types of assurance services. The most common assurance service is a financial report audit (designed to enhance the confidence of financial report users, about the truth and fairness of an entity's financial report) (IAASB, 2013).

The fourth service area is management accounting. This involves 'the creation of reports for use by management in internal planning and decision making' (Birt et al., 2020, p.8). One distinct characteristic of management accounting, when compared to the other three service

areas, is the lack of prescribed rules. Accordingly, management accounting is generally less formal than the other types of accounting, and can involve the preparation of unique tailored information on demand (Birt et al., 2020).

Compliance-based service areas, specifically audit and taxation, traditionally have more bureaucratic cultures than other service areas, due to the prevalence of routine work processes (Ballew, 1982; Bamber and Bylinski, 1982; Cushing and Loebbecke, 1986). Bureaucratic cultures are associated with low employee creativity (Cavaliere and Lombardi 2015; Wallach, 1983) and lower creativity levels are therefore anticipated in these areas. Correspondingly, the nonstandard nature of management advisory services suggests a more innovative culture, and therefore higher creativity is anticipated (Ballew, 1982; Hood and Koberg, 1991; Tomkins, 1986; Watson, 1975). Bryant et al. (2011) supported these predictions and suggested that higher creativity is demanded for financial analysis and managerial accounting service areas; and lower creativity was demanded in audit and taxation. In contrast, prior studies by Hood and Koberg (1991) and Chow et al. (2002) found no significant variation in creativity across different service areas in accounting firms. This provides the following hypotheses:

H5: Non-compliance based service areas are significantly positively related to accountant's creativity.

H6: Non-compliance based service areas are significantly positively related to accountant's perceptions of the importance of creativity. The hypothesized relationships are illustrated in Figure 1.

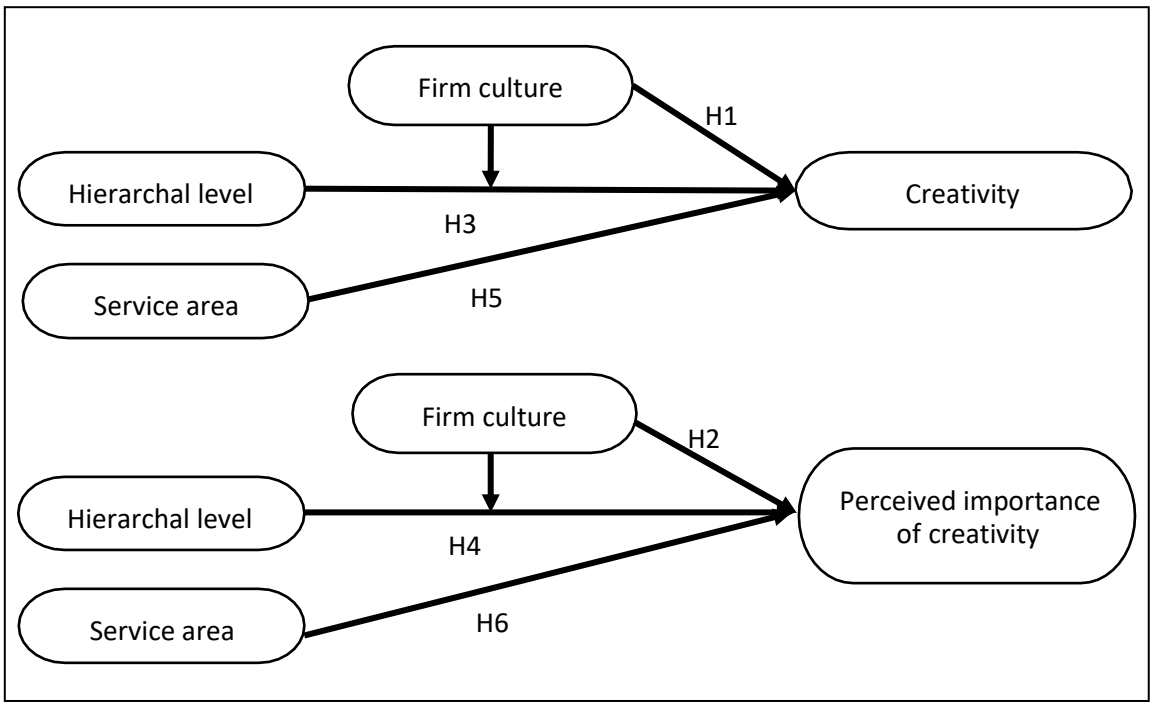

Figure 1: Hypothesized influences on accountant's creativity

METHOD

Participants and instrument

A survey of regional Australian accountants was undertaken during August and September 2015 – a time when the traditional role of accountants was being challenged both in academia (Bunney et al., 2014; Gerstein and Friedman, 2017) and in the profession (CAANZ, 2015a; 2015b). Regional Australian accountants were identified using an adaptation of the snowball sampling approach (Quinlan et al., 2019). In total 99 accountants participated in the survey.

An online questionnaire was used. Appendix 1 defines the relevant concepts and describes how they were operationalised into measurable variables for inclusion in the questionnaire. The questionnaire provided quantitative data with which to objectively measure and analyse the variables. The quantitative design meant that the variables could be formally validated to confirm that they accurately represented the associated concepts (Quinlan et al. 2019). The online platform provided convenience and anonymity to participants and allowed the researchers to easily distribute the questionnaire and efficiently collate responses (Quinlan et al., 2019).

Statistical analysis techniques

To test the hypotheses listed in Sections 2.1 to 2.3, this study used multivariate analysis of variance (MANOVA). The MANOVA followed a two-step approach. In step 1, an omnibus test was used, which revealed significant overall effects between the set of dependent variables and the independent variables. In step two, separate univariate and post-hoc analyses (Tukey HSD) revealed further details of the relationships between the dependent variables and each independent variable.

A significant benefit of using MANOVA is that it allowed for the consideration of interaction effects between independent variables (i.e. the effect of hierarchal level as moderated by firm culture). Another benefit is that MANOVA allows for the simultaneous effects of dependent variables. Where the dependent variables are logically correlated (as in this study), MANOVA is more appropriate than other approaches (such as conducting separate ANOVAs) (Hair et al. 2018).

RESULTS

Data preparation and assumption testing

Data screening for errors and missing observations (e.g. survey responses of 'not applicable') resulted in the removal of data for 13 participants. Accordingly, the sample size decreased from 99 to 86. Two composite measures were created: *importance* (representing participant's perception of the importance of creativity) and *culture* (representing participant's perceptions of firm culture). These composite variables are described in Appendix 1. The internal consistency of these composite measures was assessed by examining item-to-total and inter-item correlations. In addition, principal component analysis was used to confirm

unidimensionality. Reliability was assessed with reference to Cronbach's alpha and was found to be good ($\alpha = .86$ and $\alpha = .85$ for each composite respectively).

Data were examined for the presence of outliers: frequencies, histograms and boxplots were examined to identify univariate outliers, and Mahalanobis distance was considered in relation to multivariate outliers. Problems were identified for the variables *area* and *level* where an insufficient portion of the participants fell within some categories. Accordingly, two predominantly compliance-based service areas (taxation and audit) and two hierarchal level categories (intermediate and junior) were combined. No other concerns were noted with regard to outliers.

MANOVA can only be used when the sample is drawn from a population which is normally distributed (Hair et al. 2018). Therefore, skew and kurtosis were investigated for the interval and ratio scale variables: *CPS*, *importance* and *culture*. Z-scores confirmed that each of these variables satisfied the assumption of normality.

Non-response bias was evaluated by comparing data from early responders to that from late responders. Analysis was also conducted to assess whether the sample was biased with respect to firm size (in comparison to data from a large-scale survey of regional Australian accountants (n=546) (Wines et al., 2013)). Analysis revealed no significant effect of nonresponse bias and no bias with respect to firm size.

Descriptive statistics

The majority of participants were male (57.0%). Most were from Queensland (72.1%); followed by Western Australia (16.3%), Victoria (7.0%), Tasmania (3.5%) and New South Wales (1.2%). As shown in Tables 1 and 2, most participants worked in taxation or audit (61.1%) and most worked at partner/director level (73.3%).

Service area	**Frequency**	**Percentage**
Taxation/audit	53	61.6%
Management/consulting	11	12.8%
Financial	22	25.6%
Total	86	100%

Table 1: Main service area of participants

Level	**Frequency**	**Percentage**
Partner/director	63	73.3%
Manager/senior	13	15.1%
Intermediate/junior	10	11.6%
Total	86	100%

Table 2: Hierarchal level of participants

In addition, approximately half of participants (52.3%) worked in single-partner firms.

MANOVA

A MANOVA was conducted with *level*, *area* and *nculture* as independent variables and *CPS* and *importance* as dependent variables. Box's M test was not significant (M = 34.56, $F(24, 975.31) = 1.107$, $p>.001$). Levene's tests for each dependent variable were also not significant. Therefore, assumptions of homogeneity of the variance-covariance matrices and homogeneity of variances for univariate comparisons were not violated.

With reference to Wilk's Lambda, some multivariate effects were noted. The set of dependent variables was found to be significantly related to *nculture* ($F(2,71) = 10.17$, $p<.05$) but not significantly related to *area* ($F(4,142) = 1.72$, $p =.15$). Wilk's Lambda also indicated that the dependent variables were significantly related to the combined variables: *level* and *nculture* ($F(4,142) = 2.51$, $p<.05$).

In support of HI and H2, univariate analysis further revealed significant differences between *nculture* groups for both dependent variables (for *importance*: $F(1,72) = 14.05$, $p<.05$; for *CPS*: $F(1,72) = 11.41$, $p<.05$). Univariate analysis also showed significant differences between the interactive effects of *level* and *nculture* for *CPS* ($F(2,72) = 4.86$, $p<.05$) (providing partial support for H3); as well as significant differences between the interactive effects of *area* and *nculture* for the dependent variable *CPS* ($F(2,72) = 4.12$, $p<.05$) (this effect was not hypothesized).

Post-Hoc analyses (Tukey HSD) were also conducted. Contrary to the omnibus and univariate results, no significant differences were identified between hierarchal levels for the dependent variable: *CPS* ($p>.05$). Accordingly, only partial support was evident for H3. For the dependent variable: *importance*, Post-Hoc analysis found the mean for 'partners/directors' (M = 3.66, SD = .66) to be significantly higher than the means for 'managers/seniors' (M = 3.21, SD = .73) and 'intermediate/juniors' (M = 3.11, SD = .54). This suggests partial support for H4. Post-Hoc analysis did not identify significant difference between service areas for the dependent variable: *CPS* ($p>.05$). Therefore, no support was found for H5. Finally, for the dependent variable: *importance*, Post-Hoc analysis found the mean for 'management/consulting' (M = 4.32, SD = .36) to be significantly higher than the means for 'taxation/audit' (M = 3.43, SD = .69) and 'financial' (M = 3.35, SD = .53). This indicates partial support for H6.

DISCUSSION

Consistent with expectations, the results provide support for the hypothesized relationship between organisational culture and accountant's creativity (H1). As stated above, significant differences were identified for *nculture* for the dependent variable: *CPS*. Specifically, the mean *CPS* for cultures with strong support for creativity (4.24) was significantly higher than the mean *CPS* for cultures with low support for creativity (1.61). These results support the theory that firm culture can significantly influence the way employees think and behave. Robbins et al. (2019, p. 40) explains that:

> In many organisations, one cultural dimension [such as a focus on creativity, innovation and risk-taking] is often emphasised more than the others and essentially shapes the organisation's personality and the way its members work.

The development of a culture supportive of creativity, innovation and risk-taking is believed to encourage creative thinking while the development of a culture that is not, deters creative thinking (Kenny and Reedy, 2007; Martins and Terblanche, 2003; McKenna, 2020; Robbins et al., 2019).

An alternative explanation, however, is that 'non-creative' individuals in creative cultures leave their employment to join organisations that are less focused on creativity (and *vice versa*) (Holland, 1997; Robbins et al. 2019). Similarly, creative individuals may be deterred from joining organisations with cultures which are incompatible with their own.

The analysis also provided support for the hypothesized relationship between organisational culture and perceptions of the importance of creativity (H2). As described above, significant differences were identified for *nculture* for the dependent variable: *importance*. Specifically, the mean *importance* for cultures with strong support for creativity (3.93) was significantly higher than the mean *importance* for cultures with low support for creativity (3.14). As with H1, this finding is consistent with prior theory and supports the idea that firm culture can significantly influence the way employees think and behave.

The analysis provided only partial support for the hypothesized relationship between hierarchal level and creativity (H3). While significant differences were identified for the interactive effects of *level* and *nculture* for the dependent variable *CPS*, Post-Hoc analysis contradicted these results. Likewise, the analysis also provided partial support for the hypothesized relationship between hierarchal level and perceptions of the importance of creativity (H4). As stated above, Wilk's Lambda indicated that the combined dependent variables were significantly related to the combined variables: *level* and *nculture*. However, univariate analysis did not find a significant effect between the interactive effects of *level* and *nculture* and the dependent variable *importance*. Post-hoc analyses revealed that for *importance*, the mean for 'partners/directors' was significantly higher than the means for 'managers/seniors' and 'intermediate/juniors'. Figure 2 provides an opportunity to further understand the interaction effects relevant to H4. This graph shows: (i) all levels have higher *importance* in cultures with strong support for creativity (consistent with H1); and (ii) in a culture with strong support for creativity, managers/seniors, and partners/directors place significantly more importance on creativity than intermediates/juniors.

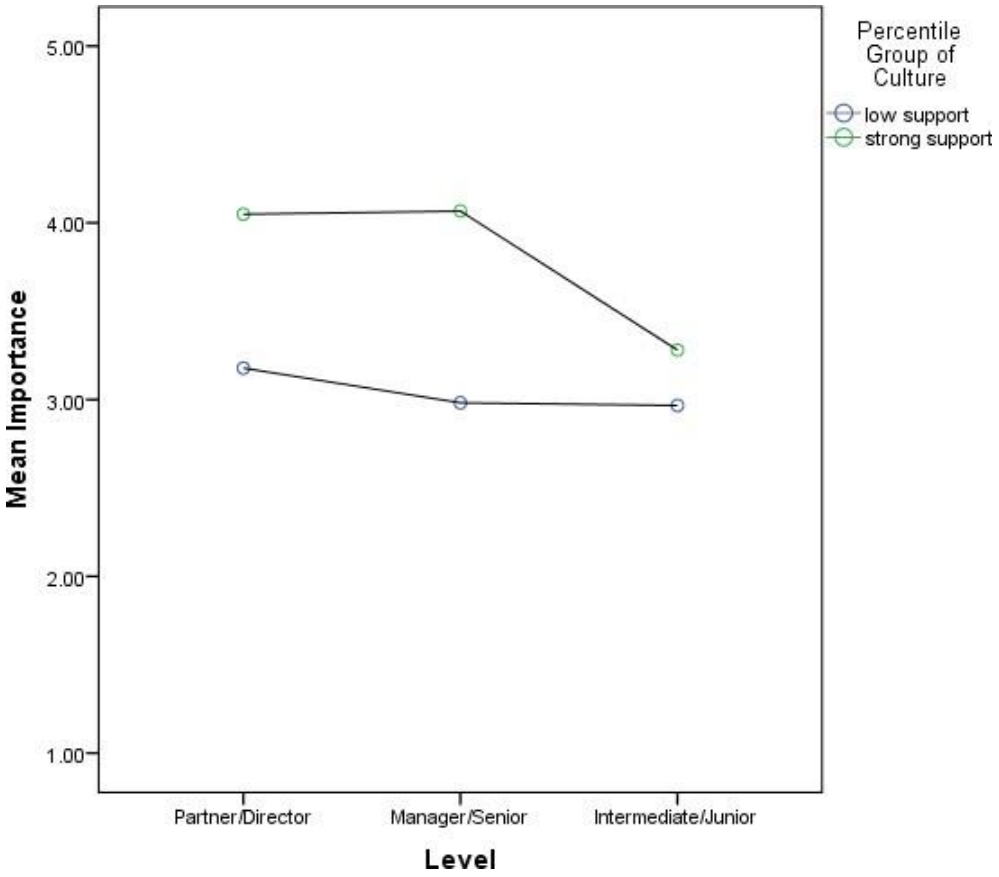

Figure 2: Mean perceptions of the importance of creativity by hierarchal level

Higher expectations of creativity and increased work complexity are possible reasons for higher-level accountants placing more importance on creativity (Chang and Birkett, 2004; Shalley et al., 2004). Consideration should also be given to the effect that accountants in higher positions are likely to have on performance measurement systems and shaping firm culture. When senior individuals place high importance on creativity the firms tend to be more supportive of creativity overall. This implies that the relationship is not a simple causal one but instead it is cyclical: accountants' perceptions continuously influence firm culture (and *vice versa*).

The MANOVA did not provide support for the hypothesized relationship between service area and creativity (H5). Using Wilk's criterion, the combined dependent variables were not significantly related to main service area. Univariate analysis also found no significant relationship between main service area and *CPS*; as did Post-Hoc comparisons. This is consistent with the findings of Hood and Koberg (1991) and Chow et al. (2002) which identified no significant variation in creativity across service areas, but inconsistent with the findings of Bryant et al. (2011) who found higher creativity was demanded for financial analysis and managerial accounting; and lower creativity for audit and taxation. The findings do not provide support for the theory that variation occurs as a result of each area developing unique cultures. Instead, the findings support the idea that 'accounting systems facilitate the negotiation of a shared organizational reality…which in a professional firm, transcends and dominates any

subcultural elements in the functional areas' (Hood and Koberg, 1991, p.18). That is, firm-wide organisational cultures may dominate and reduce the impact of specific service-area cultures. It is logical that firm-wide cultures would dominate in this study, given that participants were predominantly from single-partner firms, with staff working across multiple service divisions.

The analysis provided partial support for the hypothesized relationship between service area and perceptions of the importance of creativity (H6). Using Wilk's criterion, the combined dependent variables were found not to be significantly related to main service area. Univariate analysis also found no significant relationship between main service area and *importance*. However post-hoc tests revealed that for the variable *importance*, the mean for 'management/consulting' (4.32) was significantly higher than the means for 'taxation/audit' (3.43) and 'financial' (3.35).

CONCLUSION

The relationships supported by this research are summarised in Figure 3. In contrast to Figure 1, firm culture is shown as a dominant factor rather than a moderating factor- this research highlighted that firm culture is central to accountant's creativity.

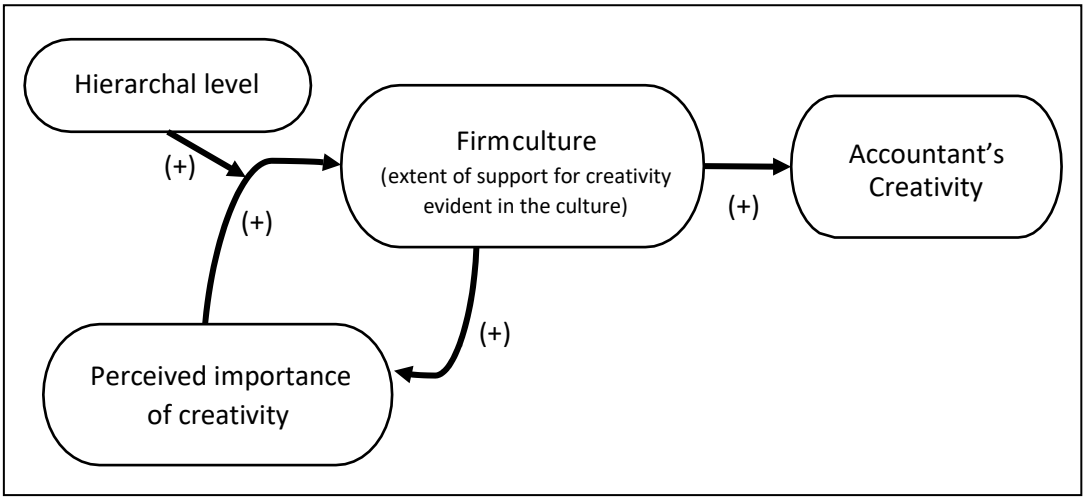

Figure 3: Influences on accountant's creativity

This study has significant implications for the accounting profession, principally for accounting firm managers. Accounting firm managers (particularly those responsible for strategic direction and human resource management) need to facilitate organisational cultures which support the creativity of individuals within their firms. The modern-day accountant is required to be creative, and creativity cannot flourish without the right conditions. Of particular note for human resource management is the amplified effect that higher-level accountants have on this aspect of organisational culture. Accounting firm managers must consider the cultures that exist within their firms, and how their higher-level accountants can be involved in facilitating desired cultural shifts.

The nature of this research lends itself to some limitations. Being quantitative in nature, this research does not provide an understanding of the participants' reasoning for selecting specific options and omits the potential for discovering additional relevant concepts. For example, in considering factors that influence accountant's creativity, the questionnaire was designed around concepts identified in the literature (that is: *level*, *area* and *culture*); it does not facilitate the identification of additional factors which may also affect creativity. Accordingly, qualitative methods could complement this research. Future qualitative research could also use firms and/or service areas as the units of analysis, to provide insights into specific organisational cultures.

Another limitation concerns the diversity of the participants involved in the study. The majority of participants worked in taxation or audit service areas, and the majority were partners or directors within their firm. While the total sample size was not problematic, the inclusion of more management accountants and more accountants from low hierarchal levels would strengthen the analysis.

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Appendix 1 - Operationalisation of concepts

The following table defines and operationalises the critical variables in the study.

Concept	**Conceptual Definition**	**Variable**	**Variable Names**	**Operational Definition**
Firm Culture	Participants' perceptions of the extent to which their firm's culture is supportive of creativity (i.e. whether creativity is valued, encouraged, facilitated and sustained)	Participant's perception of firm culture	*culture*	Arithmetic mean of responses to the following items: • In this firm, we take the time needed to develop new ideas • People in this firm cooperate in order to help develop and apply new ideas • My work colleagues are always searching for fresh, new ways of looking at problems • My work colleagues encourage me to be creative • I am rewarded for my creativity at work • It is difficult to be creative at work *(reverse-coded)* Each item was on a 5 point Likert-type scale ranging from *strongly disagree* to *strongly agree*. Note: the first 3 of these items were adapted from the 'support for innovation' section of the 14 item version of the Team Climate Inventory (TCI) (as originally developed by Anderson and West [1994] and adapted by Kivimäki and Elovainio [1999]).
			nculture	For the purpose of the MANOVA, the variable *culture* was converted to a dichotomous variable (*nculture*). Values for *culture* that were lower than or equal to the median were re-coded as 1 (representing a culture with relatively low support for creativity), and values higher than the median were re-coded as 2 (representing a culture with relatively strong support for creativity).
Accountant's creativity	Extent of creativity evident in the participants' personality	Participant's score on creative personality scale	*CPS*	Aggregate score from the 30-item Creative Personality Scale developed by Gough (1979). Scores can range from -12 to +18.

Hierarchical level	Grouping of accountants by organisational rank	Hierarchical level	*level*	1 = 'Partner/Director' 2 = 'Manager/Senior' 3 = 'Intermediate' 4 = 'Junior/Graduate/Accounting assistant'
Service area	Grouping of accountants by main service area	Main service area	*area*	1 = 'Taxation' 2 = 'Management/consulting' 3 = 'Financial' 4 = 'Audit' 5 = 'Other'
Perceived importance of creativity	Participants' perceptions of the extent to which creativity is important for their role	Participant's perception of importance of creativity	*importance*	Arithmetic mean of responses to the following items: • My job involves coming up with creative ideas to problems • My job requires me to think of new ways of doing things • My day-to-day work duties require me to be creative • It is important for me to be creative at work • Creativity is unnecessary for my role *(reverse-coded)* Each item was on a 5 point Likert-type scale ranging from *never* to *always*, or from *strongly disagree* to *strongly agree*.