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Personality Traits in Australian Business Graduates And Implications For Organizational Effectiveness

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Abstract: *The Five-Factor model is widely accepted as a robust model of personality that influences workplace behaviour and performance. Given evidence of persistent skills gaps in Australia, it is important to explore personality traits in business graduates to understand whether they have the necessary characteristics to enable the country to perform successfully nationally and to compete on a global level, particularly during periods of economic uncertainty. This study examines personality traits in 674 Australian business graduates, using the Ten-Item Personality Inventory (TIPI), and variations in traits across demographic/background characteristics. The results indicate that graduates are relatively high in extroversion, conscientiousness and emotional stability and low in openness and agreeableness. Some gender differences were apparent. The findings are largely positive for organizational performance, but raise concern for organizational well-being, effective leadership and innovativeness. There is some alignment between the findings and documented deficiencies in graduate performance, highlighting areas for intervention. Strategies for managing typical traits in business graduates and their potential impact on prevalent skills gaps are discussed for both professional and education practitioners.*

Keywords: *employability; business graduate; personality traits; graduate recruitment; organizational performance*

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The importance of high performing graduates for enhancing organizational productivity, national innovation and global competitiveness is widely acknowledged (Glover *et al*, 2002). Highly functioning and effective graduates are important not only for individual prosperity, particularly given the rising trends in graduate unemployment and underemployment (Accenture, 2013; GCA (Graduate Careers Australia), 2012), but also to advance the nation's knowledge economy, growth and productivity, identified as one of Australia's key strategic research priorities (Department of Industry, Innovation, Climate Change, Science,

Research & Tertiary Education (DIICCSRTE), 2013). The strategic focus on up-skilling the graduate workforce to meet national economic needs extends to other developed countries, such as the UK and USA (see Bowman, 2010). Developed economies are experiencing increasingly competitive graduate labour market conditions (Ratcliffe, 2013; Ross, 2012) with new graduates having to demonstrate a wealth of desired attributes, particularly in the non-technical domain, to succeed in attaining employment (Confederation of British Industry (CBI), 2011; GCA, 2012). The drive to up-skill graduates has provided impetus for a wealth of initiatives, in particular the embedding of non-technical skills and the rise in work-integrated learning (WIL) opportunities, in higher education. Despite the implementation of a range of policies and practices relating to the skills agenda, significant evidence suggests that graduates are still inadequately equipped in certain non-technical skills and attributes, in particular critical thinking, leadership, communication and team-work, and fail to fulfil the needs and expectations of the contemporary workplace (Jackson, 2012). This has promoted ongoing evaluation of the alignment between industry requirements and higher education provision (see, for example, Holtzman and Craft, 2011; Tempone *et al*, 2012) and the exploration of new and innovative pedagogical practices in the development of desired non-technical skills and attributes in undergraduates (Gersten, 2012).

There is evidence that an individual's personality will influence their work performance in a number of different ways. There are documented links between personality type and innovativeness (Steel *et al*, 2012); life satisfaction (Lounsbury *et al*, 2009); career progression and job outcomes (Mount and Barrick, 1998); job satisfaction (Judge, Heller *et al*, 2002; Walsh and Eggerth, 2005); training proficiency (Barrick and Mount, 1991); leadership effectiveness (Judge, Heller *et al*, 2002); management readiness (Encalarde and Fok, 2012); professional burnout and job engagement (Kim *et al*, 2009) and participation in self-managed work groups (Thoms *et al*, 1996). Holland (1997) argues that employees will be most satisfied and perform better where there is a good fit between their personality and work environment, enhancing organizational effectiveness and harmony. Further, an undergraduate's personality may influence their academic performance (Komarraju *et al*, 2009) and ability to attain employment (Sutin *et al*, 2009).

Given evidence of continued industry dissatisfaction with the work performance of new graduates and prevalent skills gaps in certain non-technical skills (Jackson and Chapman, 2012), and the challenges faced by intense global competition from growing

powerhouses such as China and India (Department for Innovation, Universities and Skills (DIUS), 2008), the exploration of graduate personality traits is important. Understanding these traits may inform us whether they have the necessary characteristics for Australia to perform nationally and compete on a global level, particularly during prevailing periods of economic uncertainty. Further, it may identify certain policies and practices in job design, recruitment and selection, professional development and performance management which will enhance individual work performance and, therefore, organizational productivity. Similarly, the findings may inform curricula design and pedagogical practices which nurture better the desired traits and characteristics required for graduates to succeed in the workplace.

This study explores the personality traits of business graduates using the Five-Factor Model (FFM) of personality (Costa and McCrae, 1992a). The FFM is a widely accepted taxonomy of personality traits (Digman, 1990) which identifies five dimensions representing the underlying theoretical structure of personality (Digman and Takemoto-Chuck, 1981). These are (i) Extroversion; (ii) Agreeableness; (iii) Conscientiousness; (iv) Emotional Stability; and (v) Openness (Goldberg, 1990). Despite concerns about whether a model can realistically capture all personality traits and the rigour of factor analysis upon which it was derived (Costa and McCrae, 1992b), there has been significant effort to confirm its generality and robustness (see Goldberg, 1990) and the conceptual value of the five traits is largely acknowledged. Consequently, several self-rating scales have been developed to measure the five personality traits (Costa and McCrae, 1992a).

Business graduates were selected for two reasons. First, they are considered the new frontier of management and global leadership with significant responsibility for productivity, growth and competitiveness. Second, they continue to attract criticism from industry stakeholders with regard to their current capabilities and personal attributes (Atfield and Purcell, 2010; Lowden *et al*, 2011).

The research objectives were to:

(1) Identify the defining personality traits of business graduates currently employed in Australia;
(2) Evaluate whether these traits vary by demographic/background characteristics;
(3) Outline the implications of the traits and documented variations for individual workplace and organizational performance; and
(4) Identify strategies for higher education and professional practitioners to enhance work

performance and alleviate skills gaps in light of the findings.

These objectives are addressed using data collected from 674 business graduates, from across all 39 Australian universities, who were working full-time in a range of work areas in the public, private and not-for-profit sectors. The paper is structured thus: first, there is an outline of the methodology, followed by results and, finally, a discussion of implications for workplace productivity and performance, in light of extant literature.

Background

Personality traits defined

It is important to note that various personality models have been proposed and that there is some resistance to the fundamental notion of trait analysis (Mischel, 2013). There is, however, significant agreement in the extant literature on the number of dimensions of personality; but interpretation of their meaning is not entirely homogenous (Barrick and Mount, 1991). Extroversion refers to a 'preference for companionship and social stimulation' and is characterized by social skills, popularity, participation in sports and clubs (McCrae and Costa, 1999, p 164) using terms such as 'active, assertive, energetic, enthusiastic, outgoing and talkative' (McCrae and John, 1992, p 178). Comprising ambition and sociability (Hogan, 1986), extroverts are expected to seek status and social interaction from their work, leading to leadership and higher standing (George *et al*, 2011). George *et al* argue that strong engagement and an ability to demonstrate initiative and entrepreneurship are important in extrovert's work roles. High levels of Extroversion are typical in business occupations (Lounsbury *et al*, 2009) and are a prerequisite to business success (De Janasz *et al*, 2002), although Abidin and Daud (2012) argue that it is still lacking in business graduates in relation to industry requirements.

Agreeableness concerns individual orientations to interpersonal relationships (Graziano and Tobin, 2009), described by Poropat (2009) as 'likability and friendliness' (*ibid*, p 322), and is characterized by 'forgiving attitudes, belief in cooperation, inoffensive language, reputation as a pushover' (McCrae and Costa, 1999, p. 164), using terms such as 'appreciative, forgiving, generous, sympathetic, kind, warm, trusting' (McCrae and John, 1992, p 178). With particular regard to jobs requiring cooperation and customer service, individuals with high Agreeableness seek supportive environments (Barrick *et al*, 2002) and are typically courteous, flexible and good-natured (Alibin and Daud,

2012) as well as compliant, trustworthy and stable (Clarke and Robertson, 2005).

Betz and Borgen (2010) argue that motivation and goal direction are accurate representations of Conscientiousness, described by Poropat (2009) as 'dependability and will to achieve' (*ibid*, p 322), and characterized by 'leadership skills, long-term plans, organized support network, technical expertise' (McCrae and Costa, 1999, p 164), using terms such as 'efficient, organized, planful, reliable, responsible, thorough' (McCrae and John, 1992, p 178). Workers with high levels of Conscientiousness are considered dutiful, cautious and likely to make prudent job choices (George *et al*, 2011).

Emotional Stability concerns tendencies towards hopelessness, guilt and sadness and low levels are typified by 'low self-esteem, irrational perfectionistic beliefs, pessimistic attitudes' (McCrae and Costa, 1999, p 164). It is the inverse of neuroticism which is associated with insecurity, anger, anxiety and depression, causing worry and nervousness which may inhibit job performance (Barrick and Mount, 1991). Emotional Stability concerns the ability to regulate one's emotions effectively (see Joseph and Newman, 2010), aligning to a significant extent with emotional intelligence (Lievens *et al*, 2011). Low levels of Emotional Stability may cause hostility, competitiveness and ruthlessness with a tendency to engage in conflict (Bono *et al*, 2009), although Barrick and Mount (1991) suggest that poor Emotional Stability may sometimes be a symptom of a particular job role rather than an inherent individual trait.

Finally, Openness refers to being cultured, favouring variety, novelty and change, curiosity and intelligence (Barrick and Mount, 1991) and it can be demonstrated by the presence of diverse interests, hobbies and a tendency for travel (McCrae and Costa, 1999). Typical descriptive terms used for Openness are 'artistic, curious, imaginative, insightful, original' (McCrae and John, 1992, p 178). George *et al* (2011) argue that individuals with high levels of Openness will seek intellectual or self-expressive work, pursue lifelong learning and will enjoy creativity and autonomy.

Personality and graduate selection

Acknowledging the influential role of personality traits, 45% of Australian graduate employers use personality questionnaires as a selection technique (Australian Association of Graduate Employers (AAGE), 2011). Cole *et al* (2009) discuss the common practice of recruiters conjecturing personality traits from job applicant's resumés and using this to evaluate and compare applicant employability and, ultimately, to influence selection outcomes. They found recruiter

judgement on personality traits was typically inaccurate and unreliable, with accurate inferences occurring only for Extroversion, this being more transparent through, for example, the number of extra-curricular activities, confirmation of the broad acknowledgement of its high visibility in the context of recruitment. Despite expectations that Consciousness and Openness would be transparent in resumés via strong academic achievement and an interest in diverse activities such as travel and community activities, the findings of Cole *et al* (2009) suggested otherwise. Interestingly, their study indicated that business graduates perceived to have higher levels of Conscientiousness, Extroversion and Openness received more positive employability assessments in the initial stages of screening. Furthermore, Moy and Lam (2004) found that Conscientiousness was considered to be the most important personality trait – and more important than skills – in graduate selection. Given that employers may recruit on the basis of individual personality traits, inferential inaccuracies are a matter for concern and reinforce the case for a better understanding of graduate personality profiles.

A better appreciation of typical personality traits may improve our understanding of graduate work-readiness and prevailing skills gaps in the Australian economy. Industry needs and expects strong graduate skills in team working, communication, initiative and enterprise, self-management and professionalism, although there are documented skills gaps in many of these areas (Jackson and Chapman, 2012). Examining graduate personality traits may provide human resource practitioners and educators with a better understanding of the cause of certain gaps in workplace performance and help in identifying strategies for dealing with the problem. In addition, documented variations in personality traits according to gender (Schmitt *et al*, 2008), age (Soto *et al*, 2011), business discipline (Noel *et al*, 2003) and occupational type (Barrick *et al*, 2003) are largely unexplored in the graduate cohort and may have an affect on effective human resource practices.

Method

Participants

Table 1 summarizes the demographic/background characteristics of the 674 participating business graduates. All were working full-time in Australia and had completed a business-related undergraduate degree: 80% had completed a business/commerce generalist degree and 12% a degree in a specific discipline such as management, marketing, finance and accounting.

Table 1. Demographic and background data for graduate participants.

Variable	Subgroup	Respondents	
		n	%
Age group (years)	19–21	70	10.4
	22–24	370	54.9
	25–27	137	20.3
	28–30	31	4.6
	31–40	42	6.2
	41+	24	3.6
Gender	Female	370	54.9
	Male	304	45.1
Time in current job (months)	0 to 12	413	61.3
	13 to 24	170	25.2
	25 to 36	91	13.5
Total time working since graduation (months)	0 to 12	382	56.7
	13 to 24	199	29.5
	25 to 36	93	13.8
Time since graduation (months)	0 to 12	161	23.9
	13 to 24	274	40.7
	25+	239	35.4
Organization type	Private	306	45.4
	Public	349	51.8
	Not-for-profit	19	2.8
Work area	Finance	278	41.2
	HR	46	6.8
	Policy/research/ regulation	61	9.1
	Marketing/sales/ advertising	54	8.0
	Management	119	17.7
	Administrative/legal	87	12.9
	Other	29	4.3

Procedures

Data were gathered on the personality traits of the business graduates by means of self-assessment in an online survey. Graduates from a range of different industries were invited to participate, between April and June 2012. Invitations were extended via human resource personnel based in organizations employing business graduates, identified through the AAGE and GCA websites. In addition, certain university alumni offices circulated information on the survey via electronic mail and/or social networking and career web pages. Finally, relevant professional associations publicized the survey to members using electronic mail and/or newsletters.

Instrument

The survey initially gathered data on the background demographic/employer characteristics, as summarized in Table 1. Participants were then asked to complete Gosling *et al*'s (2003) Ten-Item Personality Inventory (TIPI), a respected instrument for providing a brief

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Table 2. Ten-Item Personality Inventory (TIPI).

Here are a number of personality traits that may or may not apply to you. Please write a number next to each statement to indicate the extent to which you agree or disagree with that statement.	1=disagree strongly 2=disagree moderately 3=disagree a little 4=neither agree nor disagree 5=agree a little 6=agree moderately 7=agree strongly

You should rate the extent to which the pair of traits applies to you, even if one characteristic applies more strongly than the other.	I see myself as:
	  1 . . . . . Extroverted, enthusiastic.
	  2 . . . . . Critical, quarrelsome.
	  3 . . . . . Dependable, self-disciplined.
	  4 . . . . . Anxious, easily upset.
	  5 . . . . . Open to new experiences, complex.
	  6 . . . . . Reserved, quiet.
	  7 . . . . . Sympathetic, warm.
	  8 . . . . . Disorganized, careless.
	  9 . . . . . Calm, emotionally stable.
	10 . . . . . Conventional, uncreative.

Source: Gosling *et al*, 2003.

assessment of the Big-Five personality domains which demonstrates adequate measures of validity and reliability (Romero *et al*, 2012). It is based on individual self-ratings, using a Likert-type response format ranging from one to seven, of the extent to which participants agree that pairs of ten traits apply to them. A rating of one equates to 'disagree strongly' and seven to 'agree strongly'. Each of the five traits was represented by two items, one indicating the positive anchor for a trait, the other a negative anchor. The negative item was reverse coded and an average of the two items gave a score for each trait. Cronbach's alpha values for the five traits ranged from 0.405 to 0.716. These low values are comparable with those from other studies using the TIPI, attributed to using only two items per dimension (Ehrhart *et al*, 2009). The ten items are presented in Table 2.

Results

Personality traits

Generated data on the five traits were screened for normality using stem and leaf plots. Skewness and kurtosis fell well within the 'normal' thresholds of 5 and 10 respectively (Curran *et al*, 1996). Table 3 presents the mean ratings and standard deviation for each trait for both the graduate sample and normative data provided by Gosling *et al* (2003) and shows that the sample means were marginally above the norm for Extroversion; above the norm for Conscientiousness and Emotional Stability; marginally below the norm for Openness and below the norm for Agreeableness. These findings are broadly in agreement with those from previous studies on personality traits in business graduates, compared with non-business majors, with prior evidence of relatively low levels of Openness and Agreeableness and high levels of Emotional Stability, Extroversion and Conscientiousness (Lounsbury *et al*, 2009). High ratings for Conscientiousness were to be expected given the prevalent soft graduate labour markets which emphasize discipline, dedication, self-management and compliance as requirements for achieving and retaining highly sought after job positions (Lounsbury *et al*, 2009).

Table 3. Means and standard deviations across Big Five for sample and TIPI normative data.

Trait	Sample mean	Sample SD	Normative mean	Normative SD
Extroversion	4.57	1.46	4.44	1.45
Agreeableness	4.71	1.69	5.23	1.11
Conscientiousness	5.96	.96	5.40	1.32
Emotional Stability	5.23	1.20	4.83	1.42
Openness	5.19	1.01	5.38	1.07

Table 4. Analysis of variance for personality traits across demographic/background characteristics.

Variable	Trait	df	MS	F	p-value	η^2
Gender	Conscientiousness	1	14.378	15.969	0.000	0.023
	Emotional	1	33.901	24.487	0.000	0.035
	Agreeableness	1	20.259	7.116	0.008	0.010
Age	Emotional Stability	4	3.507	2.469	0.044	0.015
	Openness	4	1.014	2.474	0.043	0.015
Work area	Emotional Stability	6	4.090	2.903	0.008	0.025
	Openness	6	3.820	3.829	0.001	0.033

Variations in personality traits

A series of MANOVAs (a=0.05) was conducted to detect any variations in personality traits by age, gender, organization type, degree type and work area. Significant interactions were recorded for gender, λ=0.909, $F(5, 668)$=13.348, p=0.000, partial η^2=0.091; age, λ=0.947, $F(20, 2206.505)$=1.814, p=0.015, partial η^2=0.013; and work area, λ=0.926, $F(30, 2654)$=1.705, p=0.010, partial η^2=0.015. Significant results for univariate ANOVAs, at Bonferroni-adjusted a levels of 0.01, are summarized in Table 4. Interactions for age, for Emotional Stability (p =0.044) and Openness (p =0.043), were discarded due to the more stringent alpha value. Tukey *post hoc* results indicated the significant effect for Emotional Stability by work area was due to administration/legal being higher than finance (p =0.014). For Openness, those in administration/legal are significantly higher than graduates based in finance (p =0.020) and policy/research/regulation (p =0.005). These results align to a certain extent with conventional thinking on the requirements of administrative/legal professionals who interact regularly with others but are required to cope with significant pressure. The homogeneity in ratings across different work areas is interesting and prompts further investigation; for instance, categorizing the sample into explicit occupational types and examining the relationship between graduate vocational interests (Holland, 1997) and personality traits.

Table 5 presents *t*-test results for males and females for Conscientiousness, Emotional Stability and Agreeableness for the sample data. Means for the normative data are also provided for comparative purposes. The results indicate that females had significantly higher ratings for Conscientiousness (p =0.000), aligning with previous research (Schmitt *et al*, 2008), although both males and females were considerably higher than their respective normative means. This may be attributed to females needing to demonstrate more drive, dedication and discipline to survive in the traditionally male-dominated world of business. For Emotional Stability, females were significantly lower than their male counterparts (p =0.000), aligning with the literature on gender differences in personality traits (Costa *et al*, 2001; Schmitt *et al*, 2008) although, again, mean ratings for both groups were considerably higher than the norm for this trait. Finally, females scored significantly higher for Agreeableness (p =0.000), aligning with the literature (Costa *et al*, 2001), although both sample averages were notably lower than the normative means. The higher mean rating, although not significantly so, for females in Openness and Extroversion aligned with other studies (Costa *et al*, 2001; Schmitt *et al*, 2008).

Although no variations by degree type were noted, exploration of variations by major was not undertaken due to difficulties in analysing multiple majors. Noel *et al*'s (2003) assertion that variations exist by business discipline, following conventional stereotypes for each

Table 5. Personality trait variations by gender for sample and normative data.

Trait	Gender	Sample mean	Sample SD	Sample t-value	Normative mean	Normative SD
Conscientiousness	Male	5.80	0.99	−3.968	5.19	1.15
	Female	6.09	0.92		5.51	1.11
Emotional Stability	Male	5.47	1.11	5.000	5.13	1.31
	Female	5.02	1.23		4.66	1.45
Agreeableness	Male	4.52	1.77	−2.645	5.06	1.10
	Female	4.86	1.62		5.32	1.11

area, was therefore not adequately assessed. The lack of variation by age is unsurprising, given the age distribution within the sample. Although Soto *et al* (2011) detected distinct, positive trends in Agreeableness, Emotional Stability and certain facets of Conscientiousness during adulthood, their sample ranged from 10 to 65 (*n* =1,267,218) with a minimum of 945 participants at each year of age. Variations by organization type were not detected.

Implications for work performance

The implications of typical business graduate traits and their variations by demographic/background characteristics are discussed for individual workplace and organizational performance.

Job performance

Relatively high levels of Extroversion in business graduates predict efficiency (Abidin and Daud, 2012) and strong job performance, particularly for those jobs involving social interaction such as management and sales (Barrick and Mount, 1991). The relatively high Emotional Stability is critical for managing the stress and pressure associated with the corporate world (Lounsbury *et al*, 2009), an ability deemed highly important by graduate employers (Casner-Lotto and Barrington, 2006; FSSC, 2007). Low levels of 'emotionality' also predict lower levels of job burnout (see Kim *et al*, 2009), defined as 'emotional exhaustion, depersonalization, and diminished personal accomplishment' (*ibid*, p 97) and supported further by the negative relationship between Extroversion and burnout (Madnawat and Mehta, 2012). The findings therefore suggest that business graduates are less prone to professional burnout which adversely affects individuals and organizations each year and could be aggravated further by economic uncertainty and soft labour markets.

Elevated Conscientiousness is consistently associated with strong job performance because it typifies self-discipline and dutifulness (Abidin and Daud, 2012); compliance with policy and procedures (Arthur and Doverspike, 2001); systematic decision-making (Clarke and Robertson, 2005) and goal targeting and reporting and contingency planning (Abidin and Daud, 2012; Bipp and Kleingeld, 2011). The relatively high mean for Conscientiousness indicates persistence, a propensity to work hard and elevated levels of responsibility within the sample. In combination with Emotional Stability, Conscientiousness predicts positive job engagement, where workers are physically involved with tasks and emotionally connected to others in the workplace (Kim

et al, 2009). In addition, in Barrick *et al*'s (2003) full motivational model, only Conscientiousness and Emotional Stability have a theoretically stable relationship with job performance, with Openness and Agreeableness displaying only weak positive relationships in certain occupations (Barrick and Mount, 1991). There is evidence of strong professionalism, self-regulation and work ethic in business graduates (Jackson and Chapman, 2012), aligning with the high levels of Conscientiousness.

Satisfaction and organizational well-being

Emotional Stability and Conscientiousness are positively related to job satisfaction in business-related occupations (Lounsbury *et al*, 2009) and Extroversion is a determinant across most occupations (Judge, Heller *et al*, 2002). Extroverts must avoid monotony (Thiffault and Bergeron, 2003); they expect job satisfaction because work is a social outlet and a means of achieving gratification (Hurley, 1998). Strong Emotional Stability also leads to high levels of job satisfaction (Judge and Bono, 2001), creating a positive outlook for business graduates. DeNeve and Cooper (1998) found all traits were related to subject well-being and suggest that engaging in goal-directed activity and personal control will enhance life satisfaction. Conversely, Lounsbury *et al* (2009) believe all but Agreeableness are related to life satisfaction, offering a more promising outlook for business graduates. Maintaining low levels of labour turnover is, according to Moscoso and Iglesias (2009), related to all traits except Openness which, again, is reasonably positive.

Organization citizenship, considered essential for business success and organizational effectiveness, is influenced by Extroversion, Emotional Stability and Openness (Chiaburu *et al*, 2011). Agreeableness, through demonstrating courtesy, cooperation and altruism, and Conscientiousness, through diligence and achievement-orientation (Ilies *et al*, 2004), are also important. Furthermore, social responsibility – increasingly important in an era of accountability and ethical practice – depicts a community spirit, citizenship and social innovativeness and is augmented by high levels of Openness, Conscientiousness, Emotional Stability and Agreeableness (Nga and Shamuganathan, 2010). This creates a mixed picture for business graduates, particularly for females with very low levels of Agreeableness. Despite these concerns raised by lower levels of Openness and Agreeableness, the evidence suggests that business graduates are highly ethical and understand the importance of personal and social accountability (Jackson and Chapman, 2012).

Team working and communication

Lounsbury *et al* (2009) argue that higher levels of Extroversion augment 'public speaking, interactional, and social facilitation skills; a broader network of business contacts and relationships; and greater membership and participation in clubs, groups, and organizations' (*ibid*, p 203). Extroverts crave social interaction, enjoy team working and manage social relationships well (O'Neill and Kline, 2008). High levels are typically considered important for team working (McCrae and Costa, 2008) because of the related enhanced communication skills and the ability to build rapport with other members (Thoms *et al*, 1996); although O'Neill and Kline (2008) argue that this relationship is less than clear. Extroverts are considered argumentative and embrace confrontation but typically they do not experience more conflict (see Bono *et al*, 2009). High levels of Emotional Stability predict strong task performance within teams (O'Neill and Kline, 2008) and are vital for team working (Moscoso and Iglesias, 2009) and team leadership (Hogan *et al*, 1994) due to elevated self-confidence (Larson and LaFasto, 1989) and low stress levels (Wellins *et al*, 1991). This aligns with recent literature on business graduates with evidence of high self-efficacy and a propensity for effective stress management (Jackson and Chapman, 2012).

Caution, self-discipline and hard work (Costa and McCrae, 2008) will suggest the individual is a trustworthy and organized team member (Thoms *et al*, 1996) with strong team performance (Barrick and Mount, 1991), although there is some evidence which contradicts this positive relationship between Conscientiousness and team outcomes (O'Neill and Kline, 2008). The emotionally-oriented aspects of Conscientiousness are acknowledged, with strong interpersonal functioning due to an elevated propensity for guilt and shame and the ability to read emotional cues in others which guides socially appropriate behaviour (Joseph and Newman, 2010). Openness will enable workers to embrace change and be creative, important factors for team working (Thoms *et al*, 1996), although relatively low levels may be beneficial because the trait is associated with confrontational conflict management approaches and negatively associated with avoidance and compromising strategies. Bono *et al* (2009) found that individuals with high levels of Openness experienced more conflict, attributing this to both relationship and task concerns. In the study by Thoms *et al* (1996) of the relationship between traits and self-efficacy in participating in a self-managed team, Extroversion, Emotional Stability and Conscientiousness were positively related. This implies that the sample had strong beliefs that they could

successfully perform in a small group environment, further implying significant effort and outcomes in their team working environment.

Of concern, however, is Agreeableness being a fundamental trait for effective team working (Moscoso and Iglesias, 2009), through the favouring of cooperation, affiliation and compassion (Cogliser *et al*, 2012), team cohesion (O'Neill and Kline, 2008) and as an antecedent for building trust and team morale (Thoms *et al*, 1996). Higher levels imply a greater propensity for conflict resolution (O'Neill and Kline, 2008) and less frequent conflict (Bono *et al*, 2009). Managers should be mindful of the very low levels in females with regard to this trait when considering team selection and composition. Interestingly, graduate inability to manage conflict effectively is revealed in evidence from employers (Jackson and Chapman, 2012). These concerns are counterbalanced by O'Neill and Kline (2008) who argue that individual predisposition to working in teams, in terms of attraction and enjoyment, is a significant predictor of team outcomes and that personality testing should be used with caution because relationships between certain traits and team performance and cohesion are less than clear. Overall, the findings suggest that business graduates typically possess the personality traits needed to support a positive team experience; and this is in agreement with evidence elsewhere that graduates are able to work effectively with others (AAGE, 2011; GCA, 2011).

Deficiencies in the oral communication skills of business graduates (Gray and Murray, 2011), considered critical for graduate employability (AAGE, 2011), may be explained by low levels of Openness, where individuals lack confidence in communicating with others (Blume *et al*, 2013). This may be aggravated by low Agreeableness, where the presence of sensitivity and thoughtfulness is insufficient for effective communication. Evidence of a positive relationship between assertiveness, encompassed in Extroversion, and oral communication (Ockey, 2011) may, however, enhance graduate proficiency in this area.

Leadership

Extroversion is widely considered to be a predictor of leadership (Judge, Bono *et al*, 2002) and management readiness (Encalarde and Fok, 2012). It is consistently positively related to transformational leadership (Balthazard *et al*, 2009); role model status and leader emergence (Ilies *et al*, 2004; Moscoso and Iglesias, 2009); and the occupation of leadership positions and completion of leader tasks and duties (see Cogliser *et al*, 2012). Emotional Stability is also important for effective management and leadership (Encalarde and

Fok, 2012; US Small Business Administration, 2006) and the need for high levels is especially important in the current environment of economic uncertainty and intense global competition (Lounsbury *et al*, 2009). There is some evidence to suggest that individuals who are more emotionally stable will emerge as leaders (Moscoso and Iglesias, 2009), something of particular importance in virtual working environments where communication must be interpreted with logic rather than emotion (Cogliser *et al*, 2012), although Reichard *et al* (2011) detected no such relationship. In fact, Balthazard *et al* (2009) found an inverse relationship with transformational leadership, indicating the need for further research in this area (Cogliser *et al*, 2012).

Conscientiousness is also a strong predictor of leader emergence (Judge, Bono *et al*, 2002; Moscoso and Iglesias, 2009) although it is not related to the visionary behaviours demonstrated by transformational leadership (Bono and Judge, 2004). The high level of task orientation and perseverance demonstrated by the sample are important for leader emergence (Cogliser *et al*, 2012) and management readiness (Encalarde and Fok, 2012). Low ratings in Openness raise concern because it is associated with entrepreneurship (Holland, 1997), change-orientation and dynamism, and low levels are connected with conventionalism and authoritarianism (see Chiaburu *et al*, 2011). In addition, Openness is considered important for lifelong learning, knowledge sharing and proactivity (see Chiaburu *et al*, 2011) and there is some evidence to suggest a positive relationship with both transformational leadership and leader emergence (Judge, Bono *et al*, 2002; Moscoso and Iglesias, 2009), although Reichard *et al* (2011) suggest otherwise.

The implications of low Agreeableness in both males and females are mixed because although important for team working and harmony, high levels may 'inhibit one's willingness to drive hard bargains, look out for one's own self-interest, and influence or manipulate others for one's own advantage' (Zhao and Seibert, 2006, p 263). This ability to disconnect from others is important for managers and high levels of Agreeableness may be problematic because 'it interferes with the manager's ability to make difficult decisions affecting subordinates and coworkers' (*ibid*). Agreeableness is only weakly associated with emergent leadership, aside from the social-oriented aspects within virtual teams, but low levels raise concern with regard to transformational leadership, with which it is positively associated (Cogliser *et al*, 2012). Cogliser *et al* attribute this to the trait augmenting role model status due to demonstrating concern for others and trustworthiness.

Career progression

Mayrhofer *et al* (2005) found 'the more business school graduates prefer a traditional career pattern, the less they show flexibility, leadership-motivation, self-promotion/self-assertion, self-monitoring and networking, and the higher they score on conscientiousness' (*ibid*, p 52). They also found that low sociability, equivalent to Openness, prompted preference for organizational careers which require less networking, flexibility and social connection than post-organizational careers. In addition, Conscientiousness was positively correlated with organizational career aspirations, contrary to the expectations of Mayrhofer *et al* (2005), because achievement-orientation might not favour the restrictions imposed by success planning and promotion pathways. Individuals with lower levels of Emotional Stability are also more likely to gravitate to the stability of organizations than, for example, self-employment.

Innovation

Extroversion is linked with enterprising interests (Holland, 1997), continuous improvement (Stewart and Nandkeolyar, 2006) and initiating change through new ideas and processes (Niehoff, 2006). Conscientiousness is also important given that innovation requires not only the initiation of change but also its implementation, which capitalizes on achievement orientation and goal setting (Zhao and Seibert, 2006), although this positive relationship is challenged by some (George and Zhou, 2001). Ismail *et al* (2009), however, found that high levels of Openness, to capitalize on creativity and new ways of doing things, are also required for entrepreneurship (Ismail *et al*, 2009; Steel *et al*, 2012).

There is a positive relationship between Agreeableness and innovation because social interaction, trust and networking are required (Steel *et al*, 2012), of particular concern among females with very low levels. Nga and Shamuganathan (2010) found that realizing innovative ways to enhance the quality of life requires social vision, sustainability, social networks, innovation and financial returns is positively influenced by Openness, Conscientiousness, Emotional Stability and Agreeableness and, at a societal level, these personality traits influenced social entrepreneurship, the initiation and implementation of change and social value in a sustainable and sympathetic way. Furthermore, Openness – in addition to Extroversion – is considered critical for training success (Barrick and Mount, 1991; Moscoso and Iglesias, 2009), future learning being a critical factor for organizational development. Because low levels of

Openness impede entrepreneurship and future learning and of Agreeableness the networking required to achieve innovation, these findings are mixed with regard to Australia's capacity to innovate, particularly so given that business graduates are pivotal in driving change (BCA, 2006).

Strategies for stakeholders

The typical traits identified in this study provide some explanation for industry dissatisfaction with new graduates. Based on the findings, a number of strategies can be proposed to help both higher education and professional practitioners to enhance graduate work performance and alleviate persisting skills gaps.

Professional practitioners

The study confirms that business graduates rely on their work to provide variety, self-gratification and social fulfilment, augmented by high levels of Extroversion. This has significant implications for organizations which need to motivate, retain and maximize their return on investment in graduates, aggravated further by the high levels of job mobility that characterize Generation Y (Lyons *et al*, 2012). Appropriate performance management and reward systems, including goal setting and systems of early recognition, should be implemented to motivate, inspire and retain conscientious graduates with promotional pathways and succession planning which reward their achievement orientation being in place.

Despite the existing evidence of business graduates' appreciation of ethical behaviour and social responsibility, relatively low levels of Agreeableness raises concern and should prompt organizations to nurture the 'softer' side of their graduates and highlight the importance of philanthropic endeavours and civic duties. Involving graduates in collaborative initiatives between organizations and community groups to enhance social innovation and well-being are critical for reinforcing this message. Given deficiencies in Agreeableness and evidence of individuals' inability to manage conflict effectively, particular attention should be given to developing conflict resolution in induction processes and ongoing training and development opportunities. Furthermore, developing graduates' confidence in their ability to communicate effectively with others would be beneficial given the low levels of Openness and Agreeableness. Strong oral communication is considered one of the most important skills in new graduates (GCA, 2012) and may be nurtured through formal training methods such as role plays, simulations and case studies (Jackson, 2013).

Low levels of Openness are associated with weakness in the ability to initiate change (Hermann and Nadkarni, 2013). This key facet of leadership roles urges organizations to consider ways in which they can nurture and instil a positive orientation towards change in their graduates. The preference for careers in organizations rather than self-employment, due to low levels of both Openness and Emotional Stability, helps human resource practitioners to attract new graduates who are content with less networking, flexibility and social connection in their roles than is the case with those who are self-employed. It does, however, reinforce concerns about the absence of entrepreneurial spirit, creativity and dynamism among new recruits. Propensity for innovation, enterprise and thinking 'outside the box' is critical with regard to change and organizational success and requires evaluation in graduate selection, possibly using personality profiling and/or assessment centres. Attracting and retaining those graduates with high levels of Openness – and therefore having post-organizational career aspirations – is still important and may include implementing flexible working structures, motivational reward systems and fluid promotional pathways, increased networking opportunities and cross-functional working (Mayrhofer *et al*, 2005).

Educators

Practitioners in higher education should consider ways in which they can nurture both Openness and Agreeableness in their undergraduates. Although many might contest personality development in adults, there is some evidence to suggest that certain traits may be manipulated at university (Robins *et al*, 2005). This might be achieved through student-centred learning – encompassing active, problem-based and cooperative learning; and character education – the development of personal and relationship virtues (Benninga *et al*, 2006). Standalone non-technical programmes (see, for example, Jackson *et al*, 2013), coordinated efforts to embed skills and attributes into disciplinary content (Oliver, 2013) and WIL offerings (Freudenberg *et al*, 2011) offer valuable opportunities for developing attributes and traits. Targeted characteristics would include trustworthiness, generosity, flexibility, compliance, creativity, autonomy, accountability, resolve, humility, tolerance, respect and emotional intelligence.

Incorporating initiatives into undergraduate education which specifically address documented deficiencies in graduate work performance is critical for bridging endemic skills gaps. Student competitions, skill development programs and WIL, in addition to the 'Entrepreneurs in Action' [Enactus] initiative (Jones *et*

al, 2013), are central to developing creativity and enterprise in undergraduates. Providing students with opportunities to participate in volunteering and service learning is important for developing an understanding of the importance and principles of corporate and social responsibility. Authentic learning using real life client projects and cases is also invaluable in the development of skills and traits (Holmes and Miller, 200). The importance of developing conflict management skills in business undergraduates is noted by Lang (2009) with up approximately 25% of a manager's time spent dealing with conflict. This may be effectively addressed with case studies and role plays, or business simulation (Avramenko, 2012).

Conclusions

The study provides insight into the personality traits of Australian business graduates and how these vary according to certain background/demographic characteristics. Graduates typically display above average levels of Extroversion, Conscientiousness and Emotional Stability; and below average levels of Openness and Agreeableness.

Variations in personality traits across demographic and work environment characteristics were found to be very minor, other than for gender. In this study, females were found to be significantly higher in Conscientiousness and Agreeableness and lower in Emotional Stability, results that agree with those reported in the extant literature. Importantly, each gender's ratings remained above the normative mean rating for each trait other than for Agreeableness, in which both males and females were considerably lower. These typical traits and their documented variations broadly align with the extant literature and provide some explanation for prevalent skills gaps in and industry dissatisfaction with new business graduates.

From the findings it can be inferred that Australia's business graduates are typically diligent and self-disciplined individuals who are high performers and able to manage the pressures imposed by the corporate world. They are achievement-oriented and value traditional, organizational career pathways. They rely on work for social interaction, avoid monotony and have a tendency for job and life satisfaction. Although they are hard-working and thrive socially in the team environment, they may face problems with cooperation, building trust and team cohesion and have difficulties managing conflict effectively. Although they demonstrate some of the required qualities for leadership emergence and transformational leadership, they may favour conventionalism, a problem during periods of rapid global change. Similarly, business

graduates may not initiate and manage the innovative processes at the rate needed for Australia to remain globally competitive.

This study's exploration of personality traits, in the context of their documented impact on workplace behaviour, enriches our understanding of certain deficiencies in graduate workplace performance. The study outlines a number of strategies for employers for recruiting and managing these types of graduates to alleviate prevalent skills gaps. Given the influential role of personality traits on work performance, the study highlights the need for employers to develop their understanding of staff personality profiles and adapt their performance management processes and professional development offerings accordingly. Assessment of personality traits may occur during graduate recruitment and selection processes, although there are challenges associated with this (Arthur *et al*, 2001). In addition, trends in traits are likely to inform future selection criteria, succession planning and career pathway decisions. Greater awareness of the potential impact of low levels of Agreeableness, and to a lesser extent Openness, should also inform pedagogical practice in higher education. Strategies for those responsible for curricula design include embracing the development of certain traits, in addition to managing those areas of work performance which are weakened by typical personality profiles. These include the ability to manage conflict; the importance and principles of ethical behaviour; corporate responsibility and personal accountability; and creativity and entrepreneurial capabilities.

Our understanding of the effect of graduate personality on work performance and prevalent skills gaps should be developed further through future research. This might focus, first, on evaluating the influence of curriculum renewal on nurturing the Openness and Agreeableness traits in Business undergraduates; second, on enhancing our understanding of typical personality traits in other disciplines; and, third, on assessing the impact in industry of professional development in targeted traits to enhance work performance and alleviate skills gaps.

Limitations

It is important to note the study's limitations. It operationalizes a simple instrument for measuring personality traits which produces relatively low alpha values, consistent with its use in other studies. It relies on self-reported data at a single point in time, prompting concerns about common method variance (Podsakoff *et al*, 2003), although self-reported data are still considered most appropriate for studying individual personalities (Klimstra *et al*, 2012). Despite the wide

acceptance of the Five-Factor personality model, it is acknowledged that there is more to personality than is expressed in these five domains, including lower level facet traits, social-cognitive and motivational factors and developmental variables (George *et al*, 2011). On a positive note, these limitations are counterbalanced by the fact that those studied comprised a diverse group of graduates from a broad range of universities and occupational groups. We believe that the findings are of interest to educators and industry not only in Australia but in other culturally and economically-similar countries which are also suffering graduate skills gaps and need high performing graduates who are productive, innovative and contribute significantly to national growth and global competitiveness.

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