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PERSONALITY DIFFERENCES AMONG THE BIG FOUR PROFESSIONAL
SERVICE FIRMS: EXAMINING THE BIG FOUR THROUGH THE “BIG FIVE”

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ABSTRACT

“It’s the people.” That is the response an undergraduate hears when asked why PwC? Why EY? Why Deloitte? Why KPMG? But what does that really mean? How different can one “Big Four” professional service firm be from another? They all offer the same services, recruit for the same skills, and have offices in the same cities. How different can their employees really be? While plenty of research exists on the personality types of accountants, no publicly available research has examined personality differences between the “Big Four” firms. Through administering a NEO Five Factor Inventory personality test to former and current interns and staff, I’ve concluded that there are no significant differences among the recruits of the firms or service lines. Maybe it is the people, but one would be able to find those newly hired people at any Big Four firm.

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Introduction

Recently, multiple studies have examined how the personality types of accountants differs from the general population (Aranya & Wheeler, 1985; Swain & Olsen, 2012; Wheeler, 2001; Schloemer & Schloemer, 1997); however, none have examined how personality types differ among the “Big Four” professional service firms. Prior studies have examined culture differences among the then “Big Eight” accounting firms and show evidence that significant cultural differences can be found in rank (Pratt & Beaulieu, 1992), service lines (Pratt & Beaulieu), and among the firms (Carpenter et al, 1994; Williams & Dirsmith, 1988; Dirsmith & Haskins, 1991).

This study examines differences in personality types that exist among recruits across the Big Four public accounting firms (Deloitte, PwC, EY, KPMG) and service lines using the “Big Five” personality traits as a measure. The “Big Five” personality traits are five broad dimensions of personality that are used to describe human personality. They are comprised of extraversion, agreeableness, conscientiousness, neuroticism and openness, and are defined below:

Extraversion: one’s level of sociability and enthusiasm

Agreeableness: one’s level of friendliness and kindness

Conscientiousness: one’s level of organization and work ethic

Neuroticism: one’s emotional stability or maladjustment.

Openness: one’s level of creativity and curiosity

Accounting students are heavily recruited by the Big Four firms and often limit themselves to employment with one firm based on reputation; similarly, some recruiters may potentially limit themselves to one type of student based on facts they obtain from a resume. In an *Accounting Today* article from July 2013, an audit partner at Selm Johnson—a small, Omaha, Nebraska-based firm—stated, “There is definitely a difference in culture and the types of personalities that are successful from firm to firm. The type of person who fits best in one firm may not fit into or succeed in another.” This study will attempt to gain insight on which personality types tend to align with different firms.

Five-Factor Model of Personality

After speaking with Dr. Ken Levy from the Penn State University Laboratory for Personality, Psychopathy, and Psychotherapy Research, the Five-Factor model was chosen to assess personality for several reasons. It is regarded by most psychologists as the most widely accepted method among personality researchers. It is able to account for different personality traits without overlapping and it shows consistency in interviews, self-descriptions, and observations. This structure also seems to be found across a wide range of participants of different ages and of different cultures. The Five-Factor personality method also had an established means of testing and quantifying data, making surveying and analysis more efficient.

The Five-Factor model provides a comprehensive sketch of an individual's personality that summarizes his or her emotional, interpersonal, experiential, attitudinal and motivational styles. As mentioned above the five domains measured in this model are extraversion, agreeableness, conscientiousness, neuroticism, and openness. Each domain is a scale, with normal, bell-shaped distributions in the general population. Therefore, there is no score that separates people who have and don't have a trait. Most people would score around the average and show a combination of tendencies from each side of the scale of each domain; these individuals are referred to as "ambiverts." Those who score at the extremes of a scale demonstrate either a pervasiveness or dearth of that trait and will likely exhibit distinctive features of that domain.

Extraversion

Extraversion is a measure of one's sociability, ranging from introverted to extraverted. Individuals who score high on the extraversion scale are extraverts. These individuals like large social gatherings, talking, and are said to "re-charge" by interacting with others. They are also assertive, gregarious, and active--enjoying excitement and stimulation. Extraverts generally have a blithe disposition. Individuals who score low on the extraversion scale are introverts. These individuals prefer interacting with small groups of people, are reserved, and are said to "re-charge" by being alone. They are independent, even-paced, and while they do not suffer from social anxiety, they do prefer to be on their own (Costa & McCrae, 1992).

Agreeableness

Agreeableness is an interpersonal dimension, like extraversion, and measures of one's friendliness and kindness, and ranges from agreeable to antagonistic. Individuals that score high on the agreeableness scale are altruistic, sympathetic, empathetic, cooperative, and maternal. They also believe that others will reciprocate these same qualities. Individuals that score low on the agreeableness scale are egocentric, competitive, cynical, sometimes manipulative, and skeptical of others (Costa & McCrae, 1992).

Neuroticism

Neuroticism is the most ubiquitous domain of the five. It measures one's susceptibility to psychological distress, ranging from emotionally stable to emotionally maladjusted or neurotic. This domain includes one's tendency to experience fear, sadness, embarrassment, anger, guilt, and disgust. Individuals who score high on the neuroticism scale tend to be irrational, impulsive,

and cope poorly with stress. Individuals who score low on the neuroticism scale tend to be even-tempered, relaxed, and able to cope with stress in a healthy manner (Costa & McCrae, 1992).

Conscientiousness

Conscientiousness measures one's level of self-discipline, ranging from conscientious to careless. The core facets of conscientiousness relate to one's ability to plan, organize, and complete tasks. Individuals that score high on the conscientious scale are determined, reliable, and purposeful in their actions. High conscientious scores are often associated with high academic and occupational achievement. Individuals that score low on the conscientiousness scale are less able to apply the characteristics of conscientiousness when completing tasks. They are listless and indolent in pursuing goals. In addition, there is some evidence low-scores tend to be more hedonistic than average (Costa & McCrae, 1992).

Openness

Openness to experience measures one's creativity and curiosity ranging from open to closed. Openness is comprised of imagination, aesthetic sensitivity, attentiveness to inner feelings, preference for variety, curiosity, and independent thinking. Individuals that score high on the openness scale are inquisitive, often questioning the world around them as well as their own thoughts and cognizance. They often have progressive or avant-garde ideas and values. These individuals experience emotions more acutely than others. Individuals who score low on the openness scale tend to be conventional. They prefer the familiar and tend to live more conservative lives. Closed individuals have more subdued emotional responses to events than open individuals (Costa & McCrae, 1992).

Literature Review and Hypotheses

Firm Personality

I theorize personality types vary across the Big Four public accounting firms. In his study, *Audit Technology and Preferences for Auditing Standards*, Kinney (1986) used evidence compiled from interviews with members of the Auditing Standards Board to develop a classification scheme for firm structure. The structured firms included Deloitte, Haskins & Sells and Touche Ross, which would later merge in 1989. This category also included Peat, Marwick, Mitchell & Co, which would merge with Klynveld Main Goerdeler in 1987 to form KPMG. The intermediate firms included Arthur Young and Ernst & Winney, which would also merge in 1989. Arthur Andersen was also included in this category, and while the company dissolved after the Enron scandal, Ernst & Young obtained many of its clients and professional staff. The unstructured firms included Coopers & Lybrand and Price Waterhouse, which would merge in 1998. The fact that firms merged with similarly-structured firms implies that there are cultural and personality differences among firms which differentiate them from one another.

Building off Kinney's work, Carpenter et al.'s (1994) *Materiality Judgments and Audit Firm Culture: Social-Behavioral and Political Perspectives*, further demonstrated cultural differences among firms. The study proved that auditors from more structured firms incorporate more cues when forming materiality judgments than more unstructured firms, which tend to default to one, governing cue when forming materiality judgments. Analyzing these findings on firm structure through the lens of the Big Five personality dimensions produces hypothesis 1:

H_{1A}: Deloitte and KPMG non-advisory personnel will score lowest on the openness scale.

H_{1B}: PwC non-advisory personnel will score highest on the openness scale.

H_{1C}: EY non-advisory personnel will score average on the openness.

Hypothesis 1 is further bolstered by anecdotal evidence from interviews with students from the Pennsylvania State University. One student, a former audit intern with Deloitte noted that PwC employees “think outside the box.” Another, a former PwC audit intern said, “to my knowledge, our audit process is a lot different than other firms—it’s a lot more thinking through problems first, [rather] than running through a standard audit program.” Students were also quickest to stereotype KPMG and Deloitte—KPMG as a laidback, “party” or “jock” firm and Deloitte as a more uptight, conventional firm. This suggests that the two demonstrate the tralatitious thinking characteristic of closed individuals.

A study by Dirsmith and Haskins (1991), *Inherent Risk Assessment and Audit Firm Technology: A Contrast in World Theories*, utilized similar theories of structure and firm culture. They concluded:

...audit firms’ philosophy, expressed in terms of [structure] is important in the sense that it points out that these theories are theories which shape and channel auditors’ understanding of reality (84).

This conclusion by Dirsmith and Haskins evidences that there are observable differentiating cultural factors at the different firms and that those factors drive how the firm and its employees operate. This supposition creates the primary Hypothesis 2A:

H_{2A}: The four firms will exhibit significant differences in the predominance of traits found in their employees

Because this is among the first study to delve into major personality differences among the firms' recruits, Hypotheses 2B-2E rely on anecdotal evidence to specify how the firms differ. After interviewing a small group of students and faculty from the Masters of Accounting Program at the Pennsylvania State University, I was able to find trends in the perceptions of the Big Four firms.

Generally students seem to respect PwC the most, noting that it is "the most recognizable" of the Big Four and selects very strong, well-rounded students, and is , as one former EY FSO audit intern noted, "an overall great firm." One staff member noted that most of his best-performing students ultimately chose to work for PwC. However, they are also seen as "over-achievers" and "try-hards." As a former Deloitte intern noted, "they are the kids that [had] 3.8 GPAs, were somehow TA's since they were freshmen, and president of any club or Greek life they were in." This general idea of out-performance and over-achievement can be linked to a combination of conscientiousness and to neuroticism. Conscientious people, by virtue of having this trait are top performers and complete tasks efficiently and successfully. Neurotic people tend to be more fixated on doing a good job, because they are fearful of failure. They are self-conscious of how others perceive them and often strive to combat this by being high-achievers: Some degree of stress helps to motivate and drive people into high-performance. The well-roundedness of PwC employees and recognition also suggests that these employees are generally extraverted. They are strong communicators and presenters, capable of healthy social interaction with prospective employees, clients, and peers.

H_{2B}: PwC will score high in neuroticism, conscientiousness, and extraversion.

While PwC enjoyed a lot of positive perception among recruits, it seemed to also have some of the most adverse. PwC was the only firms some students seemed to strongly dislike. Several students had very negative interview experiences with the firm, noting that interviewers were rude and judgmental. One EY tax intern said, when she showed up for her PwC interview, the interviewer had her GPA circled and said it was too low and to explain to him why they should hire her. A PwC audit intern said that “there is a veneer of friendliness, but once you’re in you realize it’s just a facade.” Almost every student interviewed—even those who interned and accepted full time offers with PwC, communicated in some way that they thought the firm was arrogant.

H_{2Bi}: PwC will score lower in agreeableness than the other Big Four firms.

The majority of students interviewed believed KPMG was the most laidback firm. A PwC audit intern from the New York City office said, “KPMG is definitely the most fun firm, but it seems like they’re losing business and their reputation is suffering because of it.” Another PwC audit intern from the D.C. office said that the KPMG employees spent “work time practicing kickball for a Big Four tournament.” KPMG is also regarded among students as having the most lax alcohol policy for interns and recruiting as well as having the best looking employees. The perception of KPMG as a fun and nice firm is reflective of higher extraversion and agreeableness. Consequently, the perception that they are not as diligent as the other firms and more relaxed than the other firms is reflective of a lower neuroticism and conscientiousness.

H_{2C}: KPMG will score high in extraversion and agreeableness.

H_{2Ci}: KPMG will score low in neuroticism and conscientiousness.

Like PwC, Deloitte was regarded as top-performing firm. Many students noted its growing advisory business and thought of it as a different type of accounting firm because of this. Many thought of the firm as “serious,” “aggressive,” and “technical.” A Deloitte intern said, “There seemed to be less teaming and more competition than the other firms; everyone seemed to think they were temporarily inconvenienced I-bankers, and acted like were.” Like PwC, the combination of neuroticism and conscientiousness is driving their success; however, unlike PwC it seems to be breeding a culture of competition and breeding employees with little trust, and limited altruism or modesty, contributing to low agreeableness.

H_{2D}: Deloitte will score high on neuroticism and conscientiousness.

H_{2Di}: Deloitte will score low on agreeableness.

EY was thought to be the most down-to-earth of all the firms. A faculty member regarded the students that interned at EY to be “straight-shooters.” A PwC tax intern noted that most of the students from Penn State’s MAcc program that interned at EY were “the type of kids that put their heads down and study. They get good grades, but don’t care to make that their reputation.” An EY FSO audit intern said that “what [she] liked most about EY is they have a realistic grasp on what they were doing. They don’t treat an audit like a brain surgery. They make sure that they do a great job, but ultimately they know it’s not life or death.” A PwC intern said he thought of EY as “fun, maybe a little geeky, but friendly people.” EY is perceived as modest and straightforward as well as kind, all of which are facets of agreeableness. They’re also thought of as diligent and assiduous—reflective of conscientiousness. EY is thought to be conscientious like PwC and Deloitte, but also fun and amenable like KPMG, demonstrating high conscientiousness, but low neuroticism. However, unlike KPMG, EY was recognized as more reserved and restrained, hence a low extraversion score.

H_{2E}: EY will score high in agreeableness and conscientiousness

H_{2Ei}: EY will score low in neuroticism and extraversion.

Hypotheses 1 and 2 are summarized in Table 1.

Table 1: Hypothesized Relative Dimension Scores if Big Four Firms

Firm →	PwC	KPMG	Deloitte	EY
Dimensions ↓				
Neuroticism	↑	↓	↑	↓
Extraversion	↑	↑	—	↓
Conscientiousness	↑	↓	↑	↑
Agreeableness	↓	↓	↓	↑
Openness	↑	↑	↓	—

Service Line Personality

In addition to hypothesizing that personality types vary across Big Four firms, I also theorize that personality types vary across service lines. A study by Pratt and Beaulieu (1992), found significant differences between advisory lines and other lines of professional service. The study uses a method from the influential Dutch organizational sociologist Geert Hofstede's book on organizational culture, *Culture's Consequences*, and focused on the areas of "power distance" (the extent to which an unequal distribution of power is accepted by members of a society) and "uncertainty avoidance" (a society's tolerance for ambiguity). Individuals in advisory showed higher levels of power distance and uncertainty avoidance.

Pratt and Beaulieu (1992, p.676) found that, advisory practice environments "should attract employees who are relatively comfortable with uncertainty, are not particularly inclined to

feel work-related stress, and realize that organizational rules are not fixed, but often adapted to the changing work environment.”

These findings support previous studies’ conclusions: Watson (1975), for example, demonstrated that advisory teams perceived greater uncertainty in their environment than audit teams; Jiambalvo *et al* (1983) found that performance evaluations in advisory services differ from those in non-advisory departments; Ballew (1982) showed that advisory teams had more variability in their tasks and a generally less-structured work environment with fewer organizational barriers.

Individuals that score low on the neurotic scale are calm, even-tempered, and relaxed; they are able to face stressful situations without becoming upset. Because individuals that work in the advisory service line have been found to be comfortable with the uncertainty surrounding projects and clients, and are less inclined towards stress, I believe these individuals would score low on the neurotic scale, producing hypothesis 3A.

H_{3A}: Advisory individuals will score lower on neuroticism scales.

Individuals that score high on openness tend to be creative, divergent thinkers with a preference for variety and independence of judgment. Because advisory individuals have to deal with less structured and more ambiguous projects that require thoughtful and inventive solutions, I believe these individuals will score high on the openness scale, producing hypothesis 3B.

H_{3B}: Advisory individuals will score higher on the openness scale.

Methodology

Administration

To measure the “Big Five” personality types I will use a supplemented NEO Five Factor Inventory (NEO-FFI), consisting of standardized 60 personality items and 5 demographic items created by me for categorization purposes. The instrument is self-administered and can be scored by someone without formal training in clinical psychology or personality. It is written at an elementary reading level and expected to only take participants 10-15 minutes. The self-report format was selected because the individual has the most extensive opportunity to view his or her own behavior and is cognizant of his or her own thoughts.

The NEO-FFI is a concise, comprehensive measure of the five dimensions consisting of twelve items for each domain. While less reliable and detailed than the standard, longer NEO PI-R version of the NEO “Big Five” personality factors test, it is shorter and easier to score. Figure 2 below provides data on the validity of the NEO-FFI scales as compared to the longer, standard NEO PI-R scales. The top panel presents correlations between NEO-FFI scales and a measure of the five-factor model based on adjective self-reports obtained three years earlier. Despite the passage of time and use of a different organizational model, the convergent correlations range from 0.56 to 0.63, and none of the divergent correlations exceeds 0.20. The NEO-FFI scales are not equivalent to the full domain scales of the NEO PI-R—on average, the NEO-FFI accounts for 85% of the variance as the NEO PI-R scale. As is to be expected with abbreviated instruments, some precision is traded for speed and convenience (Costa & McCrae, 1992, pg.15). It was determined the facet-level detail obtained by longer versions was not necessary, and the research

would remain valid with the truncated exam. Additionally, the benefits of recruiting participants by having an exam was thought to out-weigh the facet-level detail gained from longer versions.

Table 2: Correlations of NEO-FFI with Validity Criteria

Criterion	NEO-FFI Form S Scales				
	N	E	O	A	C
<i>Adjective Factors (N=375)</i>					
N: Neuroticism	.62***	.00	.03	-.11*	.16**
O: Openness	-.20***	.60***	.02	.01	.20***
E: Extraversion	-.16**	.18***	.56***	-.08	.05
A: Agreeableness	.02	.11*	.04	.57***	-.03
C: Conscientiousness	-.19***	.11*	-.08	.07	.61***
<i>NEO-PI-R domains, spouse ratings (N=84)</i>					
N: Neuroticism	.52***	-.23*	-.06	-.37***	-.29**
O: Openness	-.01	.64***	.43***	.24*	.20
E: Extraversion	-.01	.26*	.65***	.11	-.03
A: Agreeableness	-.17	.28*	.24*	.63***	.15
C: Conscientiousness	-.12	.13	.07	.33**	.44***
<i>NEO-PI-R domains, single peer ratings (N=250)</i>					
N: Neuroticism	.36***	-.03	.01	-.15*	-.07
O: Openness	-.05	.39***	.17**	-.01	.00
E: Extraversion	.10	.11	.48***	.00	.12
A: Agreeableness	-.07	-.19**	-.02	.40***	-.14*
C: Conscientiousness	-.15*	-.06	-.02	.09	.33***
<i>Note.</i> Convergent correlations are shown in boldface. Adapted from Costa & McCrae, in press-b. * $p < .05$; ** $p < .01$; *** $p < .001$					

Interpretation

The five domains measured by the NEO-FFI are approximate normal curves; most individuals score near the middle and small amount score at either end. Thus, individual scores represent degrees of the trait and more extreme scores have a higher probability of demonstrating distinctive features of the trait. There is no cut off point for possessing or not possessing a trait. Because of this normal distribution, scores are meaningless unless compared to others' responses. This study will use both published norms and internal comparisons within the sample group.

Participants

Research participants are comprised of Pennsylvania State University students enrolled in the Smeal College of Business as Accounting Majors. Students have either accepted an internship offer with a Big Four firm, or have completed an internship with a Big Four firm. Students were recruited through the Accounting listserv and voluntarily agreed to participate. Additional participants were recruited through industry contacts via the EY Global Internship Group and EY San Francisco Summer Interns group. These participants completed the survey anonymously online and voluntarily agreed to participate. A total of 91 participants completed the survey.

Results and Analysis

NEO - FFI Classification Results

As described in the *Five Factor Model of Personality* section earlier, NEO - FFI scores are only meaningful when compared to a normative sample. The developers of the NEO have given the test to a large sample of adults of all ages in the United States to create a normative sample. The below table outlines scoring guidelines for each gender and personality factor.

Table 3: Normative Sample Scores for NEO - FFI

		N	E	O	A	C
Males	Very Low	≤ 6	≤ 18	≤ 18	≤ 24	≤ 25
	Low	7-13	19-24	19-23	25-29	26-30
	Ave	14-20	25-29	24-29	30-34	31-36
	High	21-28	30-35	30-35	35-39	37-42
	Very High	≥ 29	≥ 36	≥ 36	≥ 40	≥ 43
Females	Very Low	≤ 8	≤ 19	≤ 18	≤ 26	≤ 26
	Low	9-16	20-25	19-23	27-31	27-32
	Ave	17-24	26-30	24-29	32-35	33-37
	High	25-31	31-36	30-35	36-40	38-45
	Very High	≥ 32	≥ 37	≥ 36	≥ 41	≥ 44

Firms

Using Table 3 as a guide, the average scores of each personality factor for each firm were categorized. That analysis is shown in Table 4 below.

Table 4: Average Personality Factor Scores by Firm

Gender	N	Average N	Average E	Average O	Average A	Average C
All Firms						
Female	42	20.81	33.19	27.91	30.98	37.00
Male	49	15.06	32.02	32.27	29.45	36.67
Deloitte						
Female	4	23.25	33.00	33.75	29.00	34.50
Male	5	12.80	30.00	31.60	32.40	38.80
EY						
Female	27	21.41	32.07	26.59	31.07	38.37
Male	27	16.22	32.93	31.63	28.52	37.63
KPMG						
Female	5	17.00	36.20	25.60	31.60	35.80
Male	7	15.86	32.43	32.71	28.14	34.29
PwC						
Female	6	18.33	36.33	31.33	32.83	36.83
Male	10	12.50	30.30	34.00	31.40	34.70

Given the need to analyze scores by gender, hypothesis analysis will be done by gender also to ease discussion. Note that Table 1 on page 11 summarizes the hypothesis for personality dimensions of firms and hypotheses are for inter-firm comparison and not for comparison with the normative sample.

Females

PwC and Deloitte were hypothesized to score high on the neuroticism scale and KPMG and EY were hypothesized to score low. All firms scored in the average range when compared to the normative sample. Deloitte scored highest among the firms and KPMG scored lowest, validating hypotheses H_{2Ci} and H_{2D} for females. PwC scored second lowest and EY second highest negating hypotheses H_{2B} and H_{2Ei} for females.

PwC and KPMG were hypothesized to score high in extraversion; EY was hypothesized to score low; there was no hypothesis for Deloitte. All firms scored in the high range when

compared to the normative sample. PwC scored highest among the firms, KPMG scored second highest, and EY scored the lowest, validating hypotheses H_{2B} , H_{2C} , and H_{2Ei} for females.

PwC and KPMG were hypothesized to score high in openness; Deloitte was hypothesized to score low; EY was hypothesized to score average. PwC and Deloitte scored high compared to the normative sample and KPMG and EY scored average when compared. PwC scored second highest among the firms, and EY scored third highest, validating hypotheses H_{1B} and H_{1C} for females. Deloitte scored highest and KPMG scored lowest, negating hypothesis H_{1A} for females.

EY was hypothesized to score high in agreeableness and PwC, KPMG, and Deloitte were hypothesized to score low. PwC scored average when compared to the normative sample and KPMG, Deloitte, and EY scored low. Deloitte scored lowest and KPMG scored second highest validating hypotheses H_{2C} and H_{2Di} for females. PwC scored the highest among the firms, and EY scored second lowest, negating hypotheses H_{2Bi} and H_{2E} for females.

PwC, Deloitte, and EY were hypothesized to score high in conscientiousness, and KPMG was hypothesized to score low. EY scored high when compared to the normative sample, and PwC, KPMG, and Deloitte scored average. EY scored highest among the firms and PwC scored second highest, validating hypotheses H_{2B} and H_{2Ei} for females. Deloitte scored lowest among the firms and KPMG scored second lowest, negating hypotheses H_{2Ci} and H_{2D} for females.

Males

PwC and Deloitte were hypothesized to score high on the neuroticism scale and KPMG and EY were hypothesized to score low. KPMG and EY scored in the average range when compared to the normative sample and PwC and Deloitte scored low when compared. EY scored highest among the firms, KPMG second highest, Deloitte third highest, and PwC lowest, negating hypotheses H_{2Ei} , H_{2Ci} , H_{2D} , H_{2B} and for males.

PwC and KPMG were hypothesized to score high in extraversion; EY was hypothesized to score low; there was no hypothesis for Deloitte. All firms scored in the high range when compared to the normative sample. KPMG scored second highest among the firms, validating hypothesis H_{2C} for males. EY scored highest among the firms, and PwC scored third highest negating hypotheses H_{2B} and H_{2Ei} for males.

PwC and KPMG were hypothesized to score high in openness; Deloitte was hypothesized to score low; EY was hypothesized to score average. All firms scored in the high range when compared to the normative sample. PwC scored highest among the firms, KPMG second highest, EY scored third highest, and Deloitte scored lowest, validating hypotheses H_{1A}, H_{1B}, and H_{1C} for males.

EY was hypothesized to score high in agreeableness and PwC, KPMG, and Deloitte were hypothesized to score low. Deloitte scored average when compared to the normative sample and PwC, KPMG, and EY scored low when compared. KPMG scored lowest and EY scored third highest, validating hypothesis and H_{2C} and H_{2E} for males. Deloitte scored the highest among the firms and PwC scored second highest, negating hypotheses H_{2Bi} and H_{2Di} for males.

PwC, Deloitte, and EY were hypothesized to score high in conscientiousness, and KPMG was hypothesized to score low. Deloitte and EY scored high when compared to the normative sample and PwC and KPMG scored average when compared. Deloitte scored highest among the firms and EY scored second highest, PwC scored third highest, and KPMG scored lowest, validating hypotheses H_{2D}, H_{2Ei}, H_{2B}, and H_{2Ci} for males.

Service Line

Using Table 3 as a guide, the average scores of each personality factor for each service line were categorized. That analysis is shown in Table 5 below.

Table 5: Average Personality Factor Scores by Service Line

Gender	Average N	Average E	Average O	Average A	Average C
<i>Advisory</i>					
Female	20.71	34.00	27.71	30.14	35.86
Male	15.38	33.13	29.00	29.13	37.63
<i>Audit</i>					
Female	21.63	33.70	28.74	30.93	37.30
Male	14.73	31.82	33.55	29.30	36.33
<i>Tax</i>					
Female	20.00	30.00	25.43	30.86	36.43
Male	15.57	30.29	30.71	30.14	36.71

Note that earlier hypotheses are for inter-firm comparison and not for comparison with the normative sample. Advisory individuals were hypothesized to score lower on the neuroticism scale than Audit and Tax individuals, and higher on the openness scale. Female and male advisory individuals scored average on the neuroticism scale compared to the normative sample and in the middle among the three service lines. These results negate H_{3A} for both genders. Female and male advisory individuals scored average on the openness scale compared to the normative sample. Females scored in the middle among the three service lines for openness and males lowest among service lines. These results negate hypothesis H_{3B} .

Geographic Region

The analysis of average personality factor by region was completed despite no hypothesized outcome in the event there were any significant findings. Figure 1 below shows how regions were determined. Using Table 3 as a guide, the average scores of each personality factor for each region were categorized. That analysis is shown in Table 6.

Figure 1: Geographic Region Division



Table 6: Average Personality Factor Scores by Region

Gender	Average N	Average E	Average O	Average A	Average C
<i>Northeast</i>					
Female	18.33	35.67	28.52	30.38	37.29
Male	14.95	31.55	32.00	29.32	35.95
<i>Central</i>					
Female	20.00	33.33	25.33	31.00	39.33
Male	23.00	35.00	25.00	24.00	39.00
<i>Southern</i>					
Female	26.56	29.67	26.22	32.22	35.44
Male	13.40	32.10	31.50	31.20	32.70
<i>Western</i>					
Female	20.33	29.17	27.17	32.00	35.17
Male	14.27	32.60	33.73	28.53	40.87

ANOVA Analysis

Analysis of Variance (ANOVA) is a type of statistical hypothesis testing. The test is used to see if differences in three or more groups of data are statistically significant, meaning the results are unlikely to occur by chance. By construction, hypothesis testing limits Type I errors: false positives leading to false scientific claims. Results are deemed statistically significant—and the null hypothesis is rejected—when the determined p-value (probability) is less than a given threshold. A 10% significance level was selected as my threshold, because of the limited amount of data.

ANOVA testing was chosen for its ability to accomplish the following:

1. organizes additive data decomposition, and its sums of squares indicate the variance of each component of the decomposition
2. compares mean squares and F-tests, providing testing of a nested sequence of models
3. is closely related to a linear model fit with coefficient estimates and standard errors

Additionally, ANOVA testing is computationally well-designed and neat. It is robust against violations of its assumptions. It provides well-developed strength in its statistical analysis because of its multiple sample comparison technique and it is easily adaptable to different experimental designs.

Significance

ANOVA testing was used to determine if the differences in personality factors were significant. Tables 7-9 below outline the p-values, F-values, and significance by factor for firm, service line, and geographic region. A table showing the upper critical values of the F distribution for a 10% significance level is shown in Appendix B.

Table 7: ANOVA Significance for Personality Factors among Firm

<i>Firm</i>			
Key Values	$V_1 = 3$	$V_2 = 87$	Significant F-value = 2.148
Factor	p-value*	F-value	Significance
N	0.316	1.196	Not Significant
E	0.726	0.439	Not Significant
O	0.118	2.012	Not Significant
A	0.582	0.656	Not Significant
C	0.327	1.167	Not Significant

*The probability of this result, assuming the null hypothesis

None of the differences in personality factors among firms were found to be significant. While I found differences among firms, the results of ANOVA testing indicate that these differences are not significant. It should be noted openness was nearly significant, and may yield significant differences with a larger, more diverse participant sample.

Table 8: ANOVA Significance for Personality Factors among Service Line

<i>Service Line</i>				
Key Values	$V_1 = 2$	$V_2 = 86$	Significant F-value = 2.365	
Factor	p-value*		F-value	Significance
N	0.793		0.233	Not Significant
E	0.199		1.645	Not Significant
O	0.175		1.777	Not Significant
A	0.913		0.009	Not Significant
C	0.798		0.226	Not Significant

*The probability of this result, assuming the null hypothesis

None of the differences in personality factors among service lines were found to be significant.

As with firm differences, the results of ANOVA testing indicate that these differences among service lines are most likely coincidental.

Table 9: ANOVA Significance for Personality Factors among Geographic Region

<i>Geographic Region</i>				
Key Values	$V_1 = 3$	$V_2 = 83$	Significant F-value = 2.151	
Factor	p-value*		F-value	Significance
N	0.361		1.083	Not Significant
E	0.247		1.405	Not Significant
O	0.217		1.512	Not Significant
A	0.696		0.482	Not Significant
C	0.076		2.372	Significant

*The probability of this result, assuming the null hypothesis

The differences in conscientiousness among geographic regions were found to be significant. No other differences in personality factors among regions were found to be significant. These results indicate that one can reasonably predict a Big Four employee's level of conscientiousness based on where her office location is. From my results, both genders in the northeast and south and females in the west are of average conscientious; both genders in the central region and males in the west are highly conscientious.

Conclusion

While differences do exist among firms, service lines, and geographic regions, almost all of these differences were found to be not substantially significant, and support a null hypothesis. Conscientiousness among regions was the only personality factor I found to vary significantly. Thus, where a Big Four accountant lives might be a larger indicator of personality than what firm they work for or in which service line they're employed. So, is it "the people?" Maybe, but the results of my study indicate that there is a high probability of finding enjoyable people and work no matter which firm a recruit ends up working for.

Improvements

Given the scope of this thesis, there are multiple avenues to improve my results. The study could be redone with a larger sample size and more diverse participants. Most survey-takers were former interns for EY, in audit, and from the northeast, which may have skewed data or yielded biased results. An equal amount of participants from each firm, service line, and region, may yield more compelling results. A NEO-PI survey could be used instead of a NEO-FFI Form S survey for more complete results. The PI survey has 181 questions instead of 60 and produces more detailed and accurate personality factor results.

Areas for Further Research

Participants were either staff or intern level when surveyed, surveying participants of higher ranks—who have had more time to socialize as part of the firm would be an area to study further. Evidence from previous research (Pratt & Beaulieu, 1992 ; Carpenter et al, 1994;

Williams & Dirsmith, 1988; Dirsmith & Haskins, 1991) shows differences do exist, but these studies were not completed using a personality test such as the Five Factor Model this study used.

This study also yielded surprising, unhypothesized results in the difference between male and female personality traits. Males were found to be more open than females at EY, KPMG, and among audit and tax service lines; more agreeable at Deloitte; more conscientious among advisory service lines; and less neurotic at PwC and Deloitte. The reason for these discrepancies among genders in the same firm or service line is unknown. Given the changing composition of the Big Four service firms in terms of gender diversity, further investigation in this area is particularly kairotic. Tara Weiner, Head of the Accounting Advisory Board at Smeal College of Business and Regional Managing Partner at Deloitte's Mid-Atlantic Region, has voiced concerns over the male to female ratio decreasing not just in public accounting, but business disciplines in general. This decrease and the personality differences may be linked or may have adverse effects on public accounting, but further research and studies must be conducted to show any correlation or causation in these areas.

Based on my discussion with Weiner, I hypothesize these differences may be caused by women's lack of learning to "play in the corporate sandbox," as Weiner termed it. Men are taught how to "play" and how to properly respond to the corporate environment; they are groomed by leadership and mentored differently than women (Covealeski et al, 1998). Women lack equitable mentorship and sponsorship outside of formal, firm-implemented programs. Discrimination still exists in the workplace, but it isn't necessarily explicit or even deliberate—it emerges when women act in ways that aren't considered sufficiently feminine by men, who find it unseemly, if only on a subconscious level. This dynamic causes women to take a more calibrated, conscious approach to how they behave in the corporate environment—which may account for the differences seen in this study.

Appendix A

Adapted NEO FFI Survey

Personality Types in the Big Four Survey

Supplemented NEO Five-Factor Inventory, Form S

Directions: Carefully Read all of the following instructions before beginning. Part 1 of this questionnaire contains 66 statements. Read each Statement carefully. For each statement fill in the circle with the response that best represents your opinion. Make sure your answer is in the correct box.

1. I am not a worrier.

Strongly Disagree Disagree Neutral Agree Strongly Agree

2. I like to have a lot of people around me.

Strongly Disagree Disagree Neutral Agree Strongly Agree

3. I don't like to waste my time day dreaming.

Strongly Disagree Disagree Neutral Agree Strongly Agree

4. I try to be courteous to everyone I meet.

Strongly Disagree Disagree Neutral Agree Strongly Agree

5. I keep my belongings clean and neat.

Strongly Disagree Disagree Neutral Agree Strongly Agree

6. I often feel inferior to others.

Strongly Disagree Disagree Neutral Agree Strongly Agree

7. I laugh easily.

Strongly Disagree Disagree Neutral Agree Strongly Agree

8. Once I find the right way to do something, I stick to it.
 Strongly Disagree Disagree Neutral Agree Strongly Agree
9. I often get into arguments with my family and peers.
 Strongly Disagree Disagree Neutral Agree Strongly Agree
10. I'm pretty good about pacing myself so as to get things done.
 Strongly Disagree Disagree Neutral Agree Strongly Agree
11. When I'm under a great deal of stress, sometimes I feel like I'm going to pieces.
 Strongly Disagree Disagree Neutral Agree Strongly Agree
12. I don't consider myself especially "light-hearted"
 Strongly Disagree Disagree Neutral Agree Strongly Agree
13. I am intrigued by the patterns I find in art and nature.
 Strongly Disagree Disagree Neutral Agree Strongly Agree
14. Some people think I'm selfish and egotistical.
 Strongly Disagree Disagree Neutral Agree Strongly Agree
15. I am not a very methodical person
 Strongly Disagree Disagree Neutral Agree Strongly Agree
16. I rarely feel lonely or blue.
 Strongly Disagree Disagree Neutral Agree Strongly Agree
17. I really enjoy talking to people.
 Strongly Disagree Disagree Neutral Agree Strongly Agree
18. I believe letting students hear controversial speakers can only confuse and mislead them.
 Strongly Disagree Disagree Neutral Agree Strongly Agree
19. I would rather cooperate with others than compete with them.
 Strongly Disagree Disagree Neutral Agree Strongly Agree

20. I try to perform all the tasks assigned to me conscientiously.

Strongly Disagree Disagree Neutral Agree Strongly Agree

21. I often feel tense and jittery.

Strongly Disagree Disagree Neutral Agree Strongly Agree

22. I like to be where the action is.

Strongly Disagree Disagree Neutral Agree Strongly Agree

23. Poetry has little or no effect on me.

Strongly Disagree Disagree Neutral Agree Strongly Agree

24. I tend to be cynical and skeptical of others' intentions.

Strongly Disagree Disagree Neutral Agree Strongly Agree

25. I have a clear set of goals and work toward them in an orderly fashion.

Strongly Disagree Disagree Neutral Agree Strongly Agree

26. Sometimes I feel completely worthless.

Strongly Disagree Disagree Neutral Agree Strongly Agree

27. I usually prefer to do things alone.

Strongly Disagree Disagree Neutral Agree Strongly Agree

28. I often try new and foreign foods.

Strongly Disagree Disagree Neutral Agree Strongly Agree

29. I believe that most people will take advantage of you if you let them.

Strongly Disagree Disagree Neutral Agree Strongly Agree

30. I waste a lot of time before settling down to do work.

Strongly Disagree Disagree Neutral Agree Strongly Agree

31. I rarely feel fearful or anxious

Strongly Disagree Disagree Neutral Agree Strongly Agree

32. I often feel as if I'm bursting with energy.

Strongly Disagree Disagree Neutral Agree Strongly Agree

33. I seldom notice the moods or feelings that different environments produce

Strongly Disagree Disagree Neutral Agree Strongly Agree

34. Most people I know like me.

Strongly Disagree Disagree Neutral Agree Strongly Agree

35. I work hard to accomplish my goals.

Strongly Disagree Disagree Neutral Agree Strongly Agree

36. I often get angry at the way people treat me.

Strongly Disagree Disagree Neutral Agree Strongly Agree

37. I am a cheerful, high-spirited person.

Strongly Disagree Disagree Neutral Agree Strongly Agree

38. I believe we should look to our religious authorities for decisions on moral issues.

Strongly Disagree Disagree Neutral Agree Strongly Agree

39. Some people think of me as cold and calculating.

Strongly Disagree Disagree Neutral Agree Strongly Agree

40. When I make a commitment, I can always be counted on to follow through.

Strongly Disagree Disagree Neutral Agree Strongly Agree

41. Too often, when things go wrong, I get discouraged and feel like giving up.

Strongly Disagree Disagree Neutral Agree Strongly Agree

42. I am not a cheerful optimist.

Strongly Disagree Disagree Neutral Agree Strongly Agree

43. Sometimes when I am reading poetry or looking at a work of art, I feel a chill of excitement.

Strongly Disagree Disagree Neutral Agree Strongly Agree

44. I'm hard-headed and tough-minded in my attitudes.
 Strongly Disagree Disagree Neutral Agree Strongly Agree
45. Sometimes I'm not as dependable or reliable as I should be.
 Strongly Disagree Disagree Neutral Agree Strongly Agree
46. I am seldom sad or depressed.
 Strongly Disagree Disagree Neutral Agree Strongly Agree
47. My life is fast-paced.
 Strongly Disagree Disagree Neutral Agree Strongly Agree
48. I have little interest in speculating on the nature of the universe or the human condition.
 Strongly Disagree Disagree Neutral Agree Strongly Agree
49. I generally try to be thoughtful and considerate.
 Strongly Disagree Disagree Neutral Agree Strongly Agree
50. I am a productive person who always gets the job done.
 Strongly Disagree Disagree Neutral Agree Strongly Agree
51. I often feel helpless and want someone else to solve my problems.
 Strongly Disagree Disagree Neutral Agree Strongly Agree
52. I am a very active person.
 Strongly Disagree Disagree Neutral Agree Strongly Agree
53. I have a lot of intellectual curiosity.
 Strongly Disagree Disagree Neutral Agree Strongly Agree
54. If I don't like people, I let them know it.
 Strongly Disagree Disagree Neutral Agree Strongly Agree
55. I never seem able to get organized.
 Strongly Disagree Disagree Neutral Agree Strongly Agree

56. At times I have been so ashamed I just wanted to hide.
 Strongly Disagree Disagree Neutral Agree Strongly Agree
57. I would rather go my own way than be the leader of others.
 Strongly Disagree Disagree Neutral Agree Strongly Agree
58. I often enjoy playing with theories or abstract ideas.
 Strongly Disagree Disagree Neutral Agree Strongly Agree
59. If necessary, I am willing to manipulate people to get what I want.
 Strongly Disagree Disagree Neutral Agree Strongly Agree
60. I strive for excellence in everything I do.
 Strongly Disagree Disagree Neutral Agree Strongly Agree
61. Which firm were/ will you be employed with?
 Deloitte EY KPMG PwC
62. What was your first choice firm?
 Deloitte EY KPMG PwC Other
63. What was/ is your rank?
 Future Intern Former Intern Staff
64. What service line were you/ will you be in?
65. Audit/FSO Audit Tax/FSO Tax Advisory/FSO Advisory Other
66. Where was/is your office located?
67. What is your gender?
 Male Female Other

Appendix B

Upper Critical Values of the F Distribution for 10% Significance Level

		$F_{10}(\nu_1, \nu_2)$									
		1	2	3	4	5	6	7	8	9	10
ν_2	ν_1										
1	1	39.863	49.500	53.593	55.833	57.240	58.204	58.906	59.439	59.858	60.195
2	1	3.526	9.000	9.162	9.249	9.293	9.326	9.349	9.367	9.381	9.392
3	1	5.598	5.462	5.391	5.343	5.309	5.285	5.266	5.252	5.240	5.230
4	1	4.545	4.325	4.191	4.107	4.051	4.010	3.979	3.955	3.936	3.920
5	1	4.060	3.780	3.619	3.520	3.453	3.405	3.368	3.339	3.316	3.297
6	1	3.776	3.469	3.289	3.181	3.108	3.055	3.014	2.983	2.958	2.937
7	1	3.589	3.237	3.074	2.961	2.889	2.827	2.785	2.752	2.725	2.703
8	1	3.458	3.113	2.924	2.806	2.726	2.668	2.624	2.589	2.561	2.538
9	1	3.360	3.006	2.813	2.693	2.611	2.551	2.505	2.469	2.440	2.416
10	1	3.285	2.924	2.728	2.609	2.522	2.461	2.414	2.377	2.347	2.323
11	1	3.225	2.860	2.660	2.536	2.451	2.389	2.342	2.304	2.274	2.248
12	1	3.177	2.807	2.606	2.480	2.394	2.331	2.283	2.245	2.214	2.188
13	1	3.136	2.763	2.560	2.434	2.347	2.283	2.234	2.195	2.164	2.138
14	1	3.102	2.726	2.522	2.395	2.307	2.243	2.193	2.154	2.122	2.095
15	1	3.073	2.695	2.490	2.361	2.273	2.208	2.158	2.119	2.086	2.059
16	1	3.048	2.668	2.462	2.333	2.244	2.179	2.128	2.089	2.055	2.028
17	1	3.026	2.645	2.437	2.308	2.218	2.152	2.102	2.061	2.028	2.001
18	1	3.007	2.624	2.416	2.286	2.196	2.130	2.079	2.038	2.005	1.977
19	1	2.990	2.606	2.397	2.266	2.176	2.109	2.058	2.017	1.984	1.956
20	1	2.975	2.589	2.380	2.249	2.158	2.091	2.040	1.999	1.965	1.937
21	1	2.961	2.575	2.365	2.233	2.142	2.075	2.023	1.982	1.948	1.920
22	1	2.949	2.561	2.351	2.219	2.128	2.060	2.008	1.967	1.933	1.904
23	1	2.937	2.549	2.339	2.207	2.115	2.047	1.995	1.953	1.919	1.890
24	1	2.927	2.538	2.327	2.195	2.103	2.035	1.983	1.941	1.906	1.877
25	1	2.918	2.528	2.317	2.184	2.092	2.024	1.971	1.929	1.895	1.866
26	1	2.909	2.519	2.307	2.174	2.082	2.014	1.961	1.919	1.884	1.855
27	1	2.901	2.511	2.299	2.165	2.073	2.005	1.952	1.909	1.874	1.845
28	1	2.894	2.503	2.291	2.157	2.064	1.996	1.943	1.900	1.865	1.836
29	1	2.887	2.495	2.283	2.149	2.057	1.988	1.935	1.892	1.857	1.827
30	1	2.881	2.489	2.276	2.142	2.049	1.980	1.927	1.884	1.849	1.819
31	1	2.875	2.482	2.270	2.136	2.042	1.973	1.920	1.877	1.842	1.812
32	1	2.869	2.477	2.263	2.129	2.035	1.966	1.913	1.870	1.835	1.805
33	1	2.864	2.471	2.258	2.123	2.030	1.961	1.907	1.864	1.828	1.799
34	1	2.859	2.466	2.252	2.118	2.024	1.955	1.901	1.858	1.822	1.793
35	1	2.855	2.461	2.247	2.113	2.019	1.950	1.896	1.852	1.817	1.787
36	1	2.850	2.456	2.243	2.108	2.014	1.945	1.891	1.847	1.811	1.781
37	1	2.846	2.452	2.238	2.103	2.009	1.940	1.886	1.842	1.806	1.776
38	1	2.842	2.448	2.234	2.099	2.005	1.935	1.881	1.838	1.802	1.772
39	1	2.839	2.444	2.230	2.095	2.001	1.931	1.877	1.833	1.797	1.767
40	1	2.835	2.440	2.226	2.091	1.997	1.927	1.873	1.829	1.793	1.763
41	1	2.832	2.437	2.222	2.087	1.993	1.923	1.869	1.825	1.789	1.759
42	1	2.829	2.434	2.219	2.084	1.989	1.919	1.865	1.821	1.785	1.755
43	1	2.826	2.430	2.216	2.080	1.986	1.916	1.861	1.817	1.781	1.751
44	1	2.823	2.427	2.213	2.077	1.983	1.913	1.858	1.814	1.778	1.747
45	1	2.820	2.423	2.210	2.074	1.980	1.909	1.855	1.811	1.774	1.744
46	1	2.818	2.422	2.207	2.071	1.977	1.906	1.852	1.808	1.771	1.741
47	1	2.815	2.419	2.204	2.068	1.974	1.903	1.849	1.805	1.768	1.738
48	1	2.813	2.417	2.202	2.066	1.971	1.901	1.846	1.802	1.765	1.735
49	1	2.811	2.414	2.199	2.063	1.968	1.898	1.843	1.799	1.763	1.732
50	1	2.809	2.412	2.197	2.061	1.966	1.895	1.840	1.796	1.760	1.729
51	1	2.807	2.410	2.194	2.058	1.964	1.893	1.838	1.794	1.757	1.727
52	1	2.805	2.408	2.192	2.056	1.961	1.891	1.836	1.791	1.755	1.724
53	1	2.803	2.406	2.190	2.054	1.959	1.888	1.833	1.789	1.752	1.722
54	1	2.801	2.404	2.188	2.052	1.957	1.886	1.831	1.787	1.750	1.719
55	1	2.799	2.402	2.186	2.050	1.955	1.884	1.829	1.785	1.748	1.717
56	1	2.797	2.400	2.184	2.048	1.953	1.882	1.827	1.782	1.745	1.715
57	1	2.796	2.398	2.182	2.046	1.951	1.880	1.825	1.780	1.744	1.713
58	1	2.794	2.396	2.181	2.044	1.949	1.878	1.823	1.779	1.742	1.711
59	1	2.793	2.395	2.179	2.043	1.947	1.876	1.821	1.777	1.740	1.709
60	1	2.791	2.393	2.177	2.041	1.946	1.875	1.819	1.775	1.738	1.707
61	1	2.790	2.392	2.176	2.039	1.944	1.873	1.818	1.773	1.736	1.705
62	1	2.788	2.390	2.174	2.038	1.942	1.871	1.816	1.771	1.734	1.703
63	1	2.787	2.389	2.173	2.036	1.941	1.870	1.814	1.770	1.733	1.702
64	1	2.786	2.387	2.171	2.035	1.939	1.868	1.813	1.768	1.731	1.700
65	1	2.784	2.386	2.170	2.033	1.938	1.867	1.811	1.767	1.730	1.699
66	1	2.783	2.385	2.169	2.032	1.937	1.865	1.810	1.765	1.728	1.697
67	1	2.782	2.384	2.167	2.031	1.935	1.864	1.808	1.764	1.727	1.696
68	1	2.781	2.382	2.166	2.029	1.934	1.863	1.807	1.762	1.725	1.694
69	1	2.780	2.381	2.165	2.028	1.933	1.861	1.806	1.761	1.724	1.693
70	1	2.779	2.380	2.164	2.027	1.931	1.860	1.804	1.760	1.723	1.692
71	1	2.778	2.379	2.163	2.026	1.930	1.859	1.803	1.758	1.721	1.690
72	1	2.777	2.378	2.161	2.025	1.929	1.858	1.802	1.757	1.720	1.689
73	1	2.776	2.377	2.160	2.024	1.928	1.856	1.801	1.756	1.719	1.687
74	1	2.775	2.376	2.159	2.022	1.927	1.855	1.800	1.755	1.718	1.686
75	1	2.774	2.375	2.158	2.021	1.926	1.854	1.798	1.754	1.716	1.685
76	1	2.773	2.374	2.157	2.020	1.925	1.853	1.797	1.752	1.715	1.684
77	1	2.772	2.373	2.156	2.019	1.924	1.852	1.796	1.751	1.714	1.683
78	1	2.771	2.372	2.155	2.018	1.923	1.851	1.795	1.750	1.713	1.682
79	1	2.770	2.371	2.154	2.017	1.922	1.850	1.794	1.749	1.712	1.681
80	1	2.769	2.370	2.154	2.016	1.921	1.849	1.793	1.748	1.711	1.680
81	1	2.769	2.369	2.153	2.016	1.920	1.848	1.792	1.747	1.710	1.679
82	1	2.768	2.368	2.152	2.015	1.919	1.847	1.791	1.746	1.709	1.678
83	1	2.767	2.368	2.151	2.014	1.918	1.846	1.790	1.745	1.708	1.677
84	1	2.766	2.367	2.150	2.013	1.917	1.845	1.789	1.744	1.707	1.676
85	1	2.765	2.366	2.149	2.012	1.916	1.845	1.789	1.744	1.706	1.675
86	1	2.765	2.365	2.149	2.011	1.915	1.844	1.788	1.743	1.705	1.674
87	1	2.764	2.365	2.148	2.011	1.915	1.843	1.787	1.742	1.704	1.673
88	1	2.763	2.364	2.147	2.010	1.914	1.842	1.786	1.741	1.703	1.672
89	1	2.763	2.363	2.146	2.009	1.913	1.841	1.785	1.740	1.703	1.671
90	1	2.762	2.363	2.146	2.008	1.912	1.841	1.785	1.739	1.702	1.670
91	1	2.761	2.362	2.145	2.008	1.912	1.840	1.784	1.739	1.701	1.670
92	1	2.761	2.361	2.144	2.007	1.911	1.839	1.783	1.738	1.701	1.669
93	1	2.760	2.361	2.144	2.006	1.910	1.838	1.782	1.737	1.700	1.668
94	1	2.760	2.360	2.143	2.006	1.910	1.837	1.782	1.736	1.699	1.667
95	1	2.759	2.359	2.142	2.005	1.909	1.837	1.781	1.736	1.698	1.667
96	1	2.759	2.359	2.142	2.005	1.909	1.836	1.780	1.735	1.698	1.666
97	1	2.758	2.358	2.141	2.004	1.908	1.835	1.780	1.734	1.697	1.665
98	1	2.757	2.358	2.141	2.003	1.907	1.835	1.779	1.734	1.696	1.665
99	1	2.757	2.357	2.140	2.003	1.906	1.835	1.778	1.733	1.696	1.664
100	1	2.756	2.356	2.139	2.002	1.906	1.834	1.778	1.732	1.695	1.663

Appendix C

IRB Approval Letter

PENNSTATE



Vice President for Research
Office for Research Protections

The Pennsylvania State University
The 330 Building, Suite 205

Phone : (814) 865-1775
Fax: (814) 863-8699
Email : orp protections@psu.edu
Web : www.research.psu.edu/orp

Date: November 14, 2013

From: The Office for Research Protections - FWA#: FWA00001534
Julie A. James, Compliance Coordinator

To: Caitlin A. Silver

Re: Determination of Exemption

IRB Protocol ID: 43974

Follow-up Date: November 13, 2018

Title of Protocol: Personality Differences Among Big 4 Accounting Firms

The Office for Research Protections (ORP) has received and reviewed the above referenced eSubmission application. It has been determined that your research is exempt from IRB initial and ongoing review, as currently described in the application. You may begin your research. The category within the federal regulations under which your research is exempt is:

45 CFR 46.101(b)(2) Research involving the use of educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures or observation of public behavior, unless: (i) information obtained is recorded in such a manner that human subjects can be identified, directly or through identifiers linked to the subjects; and (ii) any disclosure of the human subjects' responses outside the research could reasonably place the subjects at risk of criminal or civil liability or be damaging to the subjects' financial standing, employability, or reputation.

Given that the IRB is not involved in the initial and ongoing review of this research, it is the investigator's responsibility to review [IRB Policy III "Exempt Review Process and Determination"](#) which outlines:

- What it means to be exempt and how determinations are made
- What changes to the research protocol are and are not required to be reported to the ORP
- Ongoing actions post-exemption determination including addressing problems and complaints, reporting closed research to the ORP and research audits
- What occurs at the time of follow-up

Please do not hesitate to contact the Office for Research Protections (ORP) if you have any questions or concerns. Thank you for your continued efforts in protecting human participants in research.

This correspondence should be maintained with your research records.

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May 2014

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Dean's List

Aug '12- May '13

Aug '11- May '12

Aug '09-present

March '10- present

Fall '09- present

WORK EXPERIENCE

Ernst & Young, LLP

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Intern—Global Student Experience

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Jan '13-April '13

Sydney, NSW, AU

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