MAB MAANDBLAD VOOR ACCOUNTANCY EN BEDRIJFSECONOMIE

Maandblad voor Accountancy en Bedrijfseconomie 94(3/4) (2020): 113–125
DOI 10.5117/mab.94.47818

Research Article

# Personality of internal auditors; an exploratory study in The Netherlands

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**Received** 30 October 2019 | **Accepted** 10 March 2020 | **Published** 22 April 2020

## Abstract

Many studies have been performed on the interpretation of a person's personality along the Five-factor model that includes the following traits: openness to experience, emotional stability, conscientiousness, extraversion and agreeableness. However, very little research has been done specifically on the personality of internal auditors. This study tries to establish insight into the personality of internal auditors by comparing them with other professionals.

Based on a literature review and discussion, it is hypothesized whether or not the personality traits of internal auditors differ from those of other professionals. The hypotheses on each of the five factors have been tested for internal auditors and other professionals in The Netherlands.

Results show that, for four personality traits, the internal auditor's personality is significantly different from other professionals; only the trait agreeableness shows no significant difference. Limitations of the study lie in its exploratory nature.

## Relevance to practice

The results of this study help management of internal audit departments to optimize the assignment of roles and responsibilities to staff. Moreover, the insight into the personality traits of internal auditors also has important implications for the recruitment, selection, and training of internal auditors.

## Keywords

internal auditors, personality, big-5 traits, Five Factor model

## 1. Introduction

The traditional assumption about auditing is that the auditor processes information in an objective and independent manner (McGrath et al. 2001; Sutton 1997). However, Smith (1999) suggests that this is not realistic because each individual adopts their own approach to perform tasks such as information search, judgment, and reporting. Despite the auditor´s intentions to operate objectively and independently in accordance with professional standards, the influence of personal characteristics is undeniably present and affects the auditor's judgment (see also Gul et al. 2013). It is generally accepted that judgment performance is influenced by the personality and the cognitive capacities of the information processor (Rusting 1999; McGee et al. 1978). Therefore, a focus in research on the personality of internal auditors is not surprising. This study aims to explore the differences in personality between internal auditors and a comparable population in terms of educational background. This comparison may indicate that internal auditors differ from other professionals.

Hirschberg (1978) defines personality traits[1] as stable characteristics of individual differences that may be used to describe and explain behavior. In the literature, a substantial amount of evidence supports the idea that the personality of people in various types of professions differs and each profession shares psychological characteristics (Shanteau 1988; Rubinstein 2005; Fritsch and Rusakova 2010). In auditing research, the findings indicate the presence of common personality traits for external auditors. For example, Bealing et al. (2006) performed research among external auditing students using the Myers-Briggs Type Indicator (MBTI).[2]

Their research findings confirmed results from Landry et al. (1996), which indicated that the personality type of external auditors is generally common as "ESTJ". This implies that the subjects were more Extravert rather than Introvert, Sensing rather than Intuitive, Thinking rather than Feeling, and Judging rather than Perceiving. Moreover, within the external audit profession there can be different common personality types. Kreiser et al. 1990, and Jacoby (1981) found evidence that accounting students and accountants have another profile (ISTJ) as compared to Certified Public Accountants.

In literature, much research can be found on the external auditor's personality. However, little research has been carried out on the personality of internal auditors. Although there are many similarities between the work of internal and external auditors, there are also various differences in work content. As compared to external auditors, internal auditors are for example more involved in advisory activities and are more focused on operational processes, but less involved in financial auditing. Furthermore, as internal auditors often are employed by the company, independence and objectivity could possibly also be more precarious. These circumstances make that results from personality research in the external audit environment cannot be generalized to internal auditors in a straightforward manner. Therefore, the main objective of this study is to provide insight into the traits possessed by internal auditors and to explore how auditors in general might differ from other professionals. Furthermore, this study tries to discover a kind of personality profile of an internal auditor.

The rest of the paper is organized as follows. Section 2 describes the background literature and hypotheses. Section 3 presents the research methods used, followed by the results in section 4. Section 5 contains the conclusions, discussion, implication for practical purposes, and suggestions for future research.

# 2. Literature review and hypotheses

In this section, we discuss the Five-factor model and the PfPI that measures personality (section 2.1). Section 2.2 describes the audit task that is carried out by internal auditors and is the starting point for hypothesizing the personality characteristics of internal auditors along the Five-factor model (section 2.3).

### 2.1 Five-factor model and PfPI

The Five-factor model (also known as the Big Five) is the generally accepted taxonomy for classifying personality (Barrack and Mount 1991; Costa and McCrae 1992; John and Srivastava 1999). The trait definitions, which would ultimately lead to the Five-factor model, started with Allport and Odbert's (1936) extensive listing of words related to personality traits. Parts of this list were clustered by Cattell and Allport (1943) into 35 personality traits and reduced to five factors[3] by Fiske (1949). Following further research, McCrae and Costa (1987) eventually defined the five factors or personality traits as they are now commonly used.

This study uses the Five-factor model to discuss the internal auditor's personality in detail. In the review of the dimensions, we use the traits as operationalized in the Personality for Professional Inventory (PfPI). In accordance with the methods used by De Fruyt and Rolland (2013)[4], we use nineteen sub-traits to analyze the scores on the five main traits. This instrument has been statistically validated and has strong correlations with the Revised NEO Personality Inventory (NEO PI-R) of McCrae et al. (2005). Moreover, the PfPI is especially developed to measure personality in a work-related context (Rolland and De Fruyt 2009). Many studies show that measurement scales with context related items have a higher predictive value compared to standard measurement scales (e.g. Schmit et al. 1995; Mlinaric and Podlesek 2013).

### 2.2 Audit tasks

In general, an audit can be described as an iterative process of audit activities comprising different interrelated phases (e.g. planning, fieldwork, evaluating audit evidence, reporting). In the Global Internal Audit Competency Framework, the Institute of Internal Auditors (IIA) presented ten core competencies for the success of the internal audit profession (IIA 2013). The current research covers the basic competencies that are mainly associated with 'foundation for delivery of internal audit services' and 'personal skills'. We acknowledge that required competences change as the position of an internal auditor within the organization changes. More senior positions will ask, for example, additional management and leadership competencies. For the purpose of our analysis, we focus on three major audit activities[5] that an internal auditor performs, i.e. information search (section 2.2.1), decision making (section 2.2.2) and reporting (section 2.2.3). In each of these activities, the auditor has to perform well and exhibit certain personality traits in order to meet task performance criteria.

2.2.1 Information search

Internal auditors start their work after defining the objective and scope of an audit. They formulate a problem statement and audit questions that have to be addressed during the performance of the audit task within a certain timeframe. The objective of the audit determines the need for certain information that contributes to answering the formulated audit questions. Therefore, the auditor has to seek for relevant information during the audit. Heinström (2005) defines information seeking as a dynamic and changing process despite its formal problem-solving attributes. It depends on the situation, but also to a large extent on the individual who performs the audit. In this context, the complexity of the audit object and the quantity of information needed, affect the process of information search.

2.2.2 Decision making

According to Siriwardane et al. (2014), recent scandals have changed the role of auditors and changed the demands for skills, knowledge, and attitude. They suggest that decision making is one of the most important skills that needs to be well developed in all auditors. In this respect, they state: "Even though most major decisions are made by audit seniors, managers, and partners, there are enough important decisions that all auditors must make individually or collectively". Among other audit tasks, auditors need to make decisions in for example (1) risk assessments, (2) audit planning, (3) analytical procedures and evidence evaluations, (4) auditors' correction decisions regarding journal entries, and (5) going concern judgements (see also Nelson and Tan 2005). In all these audit tasks, highly developed judgment skills are required. Therefore, decision making is a crucial element in the overall work performance of auditors.

2.2.3 Reporting

In most cases, the audit process that precedes an opinion or advice, is not observed by the end user (e.g. process owner, management). The only outcome comprises a report in written or oral form. An internal auditor, who expresses an opinion or gives advice, tries to persuade his or her audience of the audit findings and conclusions drawn. In practice, the combination of both written and oral presentation of audit findings and results is frequently used to increase the persuasiveness. In order to persuade end users, there are many ways to convince people (see also Cialdini and Goldstein 2004; Goldstein et al. 2011). Auditors should be aware of techniques of social influencing and take them into account in day-to-day practice in an ethical manner.

The three areas identified above will be used in establishing the relationship between audit tasks and desirable personality traits that auditors according to literature preferably should have in order to achieve competent judgment performance.[6] The general personality descriptions are based on Barrick and Mount (1991) and the items of the PfPI (De Fruyt and Roland 2013).

**2.3 Personality characteristics of internal auditors**

In this section, we discuss the personality traits of internal auditors using the Five-factor model:

- Openness to experience;
- Neuroticism;
- Conscientiousness;
- Extraversion;
- Agreeableness.

After a literature review and discussion, we present for each of the personality traits a hypothesis that predicts the difference in personality between internal auditors and other professionals with a similar level of education. Appendix 1 describes the five traits in more detail.

2.3.1 Openness to experience

This trait includes the four sub-traits *'innovation-orientation'*, *'intellectual versus action orientation'*, *'self-reflection'* and *'openness to change'*. High scores reflect creative and innovative people who are prepared to perform out-of-the-box thinking. Moreover, they have a broad area of interest and are open to new ideas, approaches, and methods (McCrae 1996). They tend to make abstract and conceptual analyses in order to make future plans, and they are determined to carry them out. Often, they are open to suggestions and feedback on their own behavior, which may help them in continuous improvement.

Usually, information during an audit comes from different sources and gradually becomes available. This can make individuals feel threatened by ambiguity in decision making situations (Smith 1999). Therefore, an auditor needs to seek more information to overcome their uncertainty. However, the auditor's personality should induce that the auditor comes out of their comfort zone and looks for additional information, even if the information is not readily available and additional effort is needed. In our view, this means that openness to experience is also a necessary personality characteristic of internal auditors.

In addition, there is evidence that a high score on openness to experience is positively correlated with specific types of information-search behavior, such as deep diving and broad scanning (Heinström 2005). Deep diving is a very profound and thorough manner of searching for information. This information-seeking strategy is especially relevant to (internal) auditors if they need to substantiate findings in detail or need to investigate the core of the matter.

Broad scanning is an information-seeking strategy in which the auditor looks for information from many different sources to find confirming and disproving evidence. This helps to prevent the auditor from encountering bi-

ases in their judgment such as tunnel vision. McMillan and White (1993) showed that auditors tend to look more for confirming evidence rather than for disconfirming evidence. Moreover, a broad orientation on the audit object and associated risks is especially helpful in the planning stage of an audit to achieve an adequate problem representation (framing). In addition, openness to others and their positions, combined with readiness to compare several perspectives, expand the chances of altering the persuasiveness (Oreg and Sverdlik 2014).

Finally, Cooperider et al. (2008) suggest that in order to let the audit be successful the auditor should have an open mind, formulate questions positively, and have an equal dialogue with the auditee. In this respect, Conger (1998) suggests that effective persuaders not only listen carefully to others but are also open-minded and never dogmatic. In this view, open-minded internal auditors also integrate their thoughts and ideas in a shared solution, which increases the acceptance of the outcome of an internal audit.

Though we did not find evidence of a direct link between internal auditors' personality and openness to experience from previous research, the discussion in this section reveals some expectations regarding this relationship.

We therefore formulate the following hypothesis:

**H1:** Internal auditors on average have a higher score for openness to experience as compared to other professionals.

### 2.3.2 Neuroticism

This trait is also referred to as emotional stability, which sits on the other side of the neuroticism spectrum. It reflects sub-traits such as *'sensitivity'*, *'self-confidence'*, *'susceptibility to stress'* and *'tolerance of frustration'*. Individuals, that score high – and are emotionally stable – can cope very well with stressful and emotional situations (e.g. time pressure, criticism, disagreement). Moreover, they can handle problems as they occur and overlook situations, and calmly look for appropriate solutions. They are also good at processing setbacks and have good mental resilience.

In practice, an auditor is initially confronted with uncertainty about the audit object. The task complexity is determined by the amount and clarity of the data as modeled by Bonner (1994). The more complex the audit object and task, the higher the associated uncertainty. In research, the subject of intolerance of uncertainty is identified and is a characteristic trait that arises from negative beliefs about uncertainty and its consequences. The intolerance of uncertainty[7] heightens anxiety and stress which may affect work performance negatively (Rosen et al. 2014). For example, the ambiguous nature of information (e.g. cue inconsistency) may affect the work attitude of the information processor. People who are intolerant of ambiguity may seek out more information to overcome their uncertainty, but may still be less confident in their decisions than tolerant people (McGhee et al. 1978). It is important that the auditor´s personality should not be susceptible to stress in order to adequately cope with uncertainty.

Furthermore, the credibility of an auditor is crucial to the perceived quality of audits because it affects the decisions of others (see for example Menon and Williams 1991; Nichols and Smith 1983). As Falcione (1974) indicates, emotional stability is one of the four significant and statistically autonomous dimensions[8] for measuring source credibility. Research in the communication area indicates that individuals that score high on neuroticism express themselves with lower degrees of self-confidence (McCroskey et al. 2001). Therefore, individuals with lower emotional stability are likely to be less persuasive. It is obvious that high emotional stability is a desirable personality trait for internal auditors.

Based on this literature review and discussion, we formulate the following hypothesis:

**H2:** Internal auditors on average have a higher score for emotional stability (and therefore a lower level of neuroticism) as compared to other professionals.

### 2.3.3 Conscientiousness

The sub-traits *'systematic approach'*, *'self-discipline'*, and *'motivation'* are related to conscientiousness as De Fruyt and Rolland (2013) indicate in the PfPI. People who score high on the conscientiousness dimension are orderly, disciplined and work systematically. Usually they are ambitious and demand the same efforts of the environment as they demand of themselves. They are highly intrinsically motivated and have a sharp focus on the things that have to be done.

In the meta-study of Barrick et al. (2001), the researchers conclude that conscientiousness is a valid predictor across performance measures in all occupations studied. It is argued here that auditing is an occupation where conscientiousness plays a more important role as compared to many other professions. In the Elaboration Likelihood Model (Petty and Cacioppo 1986), there is a high emphasis on the central route to persuasion. The chance that a statement is accepted from an conscientious person is more likely than from a less conscientious person. Therefore, conscientiousness is assumed to be crucial in job performance of internal auditors.

The following hypothesis is stated:

**H3:** Internal auditors on average have a higher score on conscientiousness as compared to other professionals.

### 2.3.4 Extraversion

Characteristics relating to extraversion are *'enthusiasm'*, *'sociability'*, *'energy'* and *'assertiveness'*. Extravert people are enthusiastic and outgoing. They thrive in the social arena, are approachable and approach others very easily. They look for publicity, are acquainted with many

and constantly expand their network. Finally, they are assertive and like to put forward their ideas even when this leads to conflict.

The auditor performs a job that requires different personality traits in various phases of an audit.[9] For example, preparing an audit programme, reviewing documents, writing notes, and preparing a report are desk work activities that can be characterized as an introvert type of activity. This may lead one to expect that on traits as sociability an auditor will score lower or equal to other professionals. In contrast, making appointments, carrying out interviews and presenting or defending a report are more extravert. Moreover, it is expected from auditors that they do not speak freely about (confidentially) acquired information or share with others. This may be expressed in visible lower levels of enthusiasm and sociability. In practice, the work of an auditor consists of a mix of the above mentioned activities. Therefore, we may assume a variability in extraversion.

In literature, we see however that there is evidence showing a positive correlation between extraversion and information seeking behavior (Tidwell and Sias 2005; Heinström 2005; Halder et al. 2010). More specifically, Heinström (2005) revealed a positive correlation between broad scanning and extraversion. As earlier discussed in this paper, this is an important search strategy that auditors follow.

In addition, research of Oreg and Sverdlik (2014) shows that extraverted individuals are more capable of persuading others than introverted individuals. This refers to the sub-trait assertiveness. However, this does not mean that extraversion is the key to superior job performance. Barrick et al. (2001) summarized the findings of fifteen prior meta-analytic studies on the relationship between the Big Five personality traits and job performance. The results show that extraversion did not predict overall work performance and performance in sales, but it did predict success for managerial performance. This suggests that job performance depends on the specific job characteristics. However, if we put high emphasis on the persuasion (assertiveness) of internal auditors, a positive relationship with extraversion is expected.

This leads to the following hypothesis:

**H4:** Internal auditors on average have a higher score on extraversion as compared to other professionals.

2.3.5 Agreeableness

The trait agreeableness (also described as altruism by De Fruyt and Rolland 2013) is approximated by the sub-traits *'competitiveness'*, *'focused on others'*, *'trusting of others'*, and *'accommodating others'*. Agreeable people are fair and respectful to others. Often, their focus is on how others feel and they adjust their behavior to accommodate others. Sometimes these people are judged by colleagues as socially naïve. Individuals with high scores on agreeableness usually avoid conflicts and differences of opinion, but may also have difficulty addressing problems or putting forward their opinions, even when it is necessary to address them.

In the meta-study of Barrick et al. (2001), it was established that agreeableness is not an important predictor for job performance in any studied occupational group. The agreeableness displays a weak relationship with work performance criteria. In addition, the literature review specifically focused at persuasion and information seeking since we identified these aspects as relevant for internal auditors. However, Oreg and Sverdlik (2004) did not find a significant relationship between agreeableness and persuasion. There was also no relationship found between information seeking behavior and agreeableness.

As result of the above discussion, we formulate a hypothesis that does not explicitly identify a difference:

**H5:** There is no difference on agreeableness between internal auditors and other professionals.

# 3. Method used

In section 3.1, we discuss the design of the research study and the survey used. Section 3.2 describes the subjects who participated in the survey as well as the group of other professionals that has been used for comparison purposes. Finally, the data entry and initial analysis is discussed in section 3.3.

## 3.1 Design

The study is based on the PfPI standard survey (De Fruyt and Rolland 2013) which has been used to establish the personality of the internal audit professionals. In this section, we describe the nature of the study by giving details about survey, statements, pilot study and data gathering.

*Survey:* The survey used was the standard Personality for Professionals Inventory (PfPI) which has been scientifically validated (De Fruyt and Wille 2013). This survey has been developed and tested extensively by De Fruyt and Rolland (2013). The survey exists of 183 statements, divided among nineteen personality traits. The subjects had to score the statements on a scale of five (Likert scale) qualifications: "not at all characteristic", "not characteristic", "more or less characteristic", "characteristic" and "completely characteristic". The survey was sent out and performed by TalentLens on their online survey platform and takes around thirty minutes to fill out. The same survey was used for the internal auditors and the other professionals.

The PfPI survey has been extensively analyzed for language differences (through a pilot study described by De Fruyt and Rolland 2013), validity of items, social desirability in judging the statements, and the extent to which the statements are in fact representative

of the traits which they are aimed to belong to. As part of the extensive testing, the validity of the twenty-one sub-traits and their approximation of the five main traits was studied. It was concluded that nineteen of the twenty-one sub-traits could be used in the approximation and subsequent analysis of the five main traits. As a result, the current study uses nineteen sub-traits to measure personality.

*Statements:* The nature of the statements is work-related, for example: "I am forward looking and can anticipate problems". Answers to the statements are given in the form of a five-point Likert scale. It is important to note that the statements and testing method were not designed by the current researchers but were part of the standard PfPI and had been validated during the original analyses by TalentLens at the time of design of the survey. As the subject group was the Dutch IIA chapter, and as the PfPI is available in French, Flemish and Dutch, the survey was conducted in the Dutch language.

*Pilot study:* Since the survey instrument was already extensively tested, the pilot study was merely focused on the accuracy of the data gathering as well as the data transfer process. The survey was send to 113 subjects. The subjects in this pilot study were not chosen randomly but were approached as they were in the personal network of various students at the University of Amsterdam as part of their theses project. After the pilot was performed and alteration had been made in the data gathering process, the survey was ready to send out by the researchers.

*Data gathering:* As part of a wider exploratory research performed in name of the IIA and University of Amsterdam, the PfPI survey was sent out to all members of the Dutch chapter of the IIA. It is therefore important to note that this study looked solely at a sample of internal auditors, which were member of the Dutch IIA. In line with the Attraction-Selection-Attrition model (ASA)[10], we assume that the personality characteristics of this group are relatively homogeneous and therefore representative for the personality of internal auditors. This does not mean that all subjects were necessarily Dutch or worked in the Netherlands. In order to protect the privacy of the participants, the invitation to participate in the survey was sent out by email to each IIA member by the research company TalentLens. The email contained a link to the tool and was accompanied by a letter of explanation signed by the chair of the IIA and the project leader. The explanation clearly stated the anonymous nature of the survey. After several weeks, further reminders were sent out to the subjects.

We tried to strengthen the research design by promising in advance to participants that after completing the survey they would receive a report with a description of their own personality. By doing so, we expected to assure the accurately and sincerely answering of the survey. Moreover, we expected overall to boost the response rate of the survey.

### 3.2 Subjects

Below, we describe the groups of internal auditors and other professionals. In order to compare the internal auditors with the other professionals, we use high level of education as distinguishing factor. Education is an important determinant of a competent professional as described in the Common Body of Knowledge (CBOK) and by the Institute of Internal Auditors (IIA). Based on an analysis of the described competencies in CBOK, Hassall et al. 1996 rate the required competence of internal auditors as high and demanding. They argue that the behavior of internal auditors is largely cognitive and is exhibited in complex decision making. As a consequence, a higher education is the most suitable distinguishing factor and is therefore used to identify the relevant references group of other professionals.

*Internal Auditors:* The PfPI survey was sent to all members (2,518) of the Dutch IIA. Out of the 2,518 members, 313 (12.4%) responded and filled out the complete survey. Due to dependency on the participant's willingness to respond and fill out the survey, the population is not a completely random sample. This means that, though the results provide insights for the population, they cannot simply be generalized for the entire internal auditor population. However, due to the relatively high rate of response, these results can be comfortably be seen as representative of Dutch IIA members. Out of the 313 respondents, 97.8% had the Dutch nationality and 86.2% indicated to have a college degree or university degree. The remaining respondents, mostly indicated having completed another form of higher education.

*Other professionals:* In order to compare the data from internal auditors with other professionals, we used a cross-sectional sample of 1,021 professionals from the work force in The Netherlands with a similar level of education as internal auditors registered with the IIA. This was possible because TalentLens used also the same Dutch version of the PfPI as used in our study. These data solely are used in this research to serve as reference group to analyze the differences between other professionals and the currently researched group of internal auditors. In line with our definition, TalentLens defined higher education as having obtained a college degree, university degree (including PhD) or post-master. From the total of 1,021 professionals, 347 (34.0%) indicated that they had a higher education and were useful in the comparison.

Although we suggest that gender differences would not affect the findings in this study due to the assumption of ASA as already discussed in section 3.1, we analyzed differences in this respect. The group of internal auditors contained 72% males and 28% females with an overall average age of 44 (ranging from 25 to 72). The group of professionals contained 52% males and 48% females. All have obtained a degree of the level college or higher. Additional analyses for gender and age did not reveal large anomalies.

### 3.3 Data entering and analysis

TalentLens entered the online survey data for the internal auditor group into Excel through a data-dump. This data was then imported into SPSS. A box-plot was used to detect any outliers and analyze any abnormalities in the data. One abnormality was found for age and this observation was removed from the dataset. Also two further outliers were detected with an impossible amount of work experience. Therefore, the further data-analyses were conducted on the 310 remaining subjects. Several graphical analyses were run to give insight into the spreads of scores in the internal auditor group.

TalentLens provided the researchers with access to the complete and detailed data set in SPSS, containing the complete dataset of the other professionals (at the same level as the internal auditors). The two datasets were merged in SPSS and apart from descriptive, homogeneity of variance tests and independent sample t-tests were performed on both the main traits and all underlying traits.

## 4. Results

### Descriptive statistics

Table 1 presents the descriptives per main personality trait for the internal auditors and the other professionals. This table also includes the results for each of the underlying sub-traits.

The results show that four out of the five personality traits are higher for the internal auditor group. Moreover, these results were significant. Only for agreeableness the average score was lower for the internal auditors than for the other professionals. However, this difference was not significant.

### Testing for significance of differences

To test whether the differences indicated in the descriptives were significant and therefore lead to acceptance or rejection of the hypotheses, independent sample t-tests were performed. The t-tests were performed for each of the nineteen personality sub-traits that constitute the five main personality traits.

### Homogeneity of variance

The results of the Levene's test for homogeneity of variance showed homogeneity for extraversion and openness to experience. Therefore, the significance scores for the openness to experience and extraversion will be taken with 'equal variances assumed' and for the other three the 'equal variances not assumed' will be used. Variances show the spread of the data within the group, and the equality of variances show whether the two groups are evenly distributed (have a similar spread of scores). When this was not the case, the "equal variances not assumed" scores was used.

**Table 1.** Descriptive statistics.

| | Other professionals n = 311 | | Internal Auditors n = 310 | | |
|---|---|---|---|---|---|
| **Personality trait** | **μ** | **σ** | **μ** | **σ** | **t** |
| **Openness (to experience)** | 121.42 | 13.45 | 127.67 | 12.54 | 6.14*** |
| *Innovation-orientation* | 25.68 | 4.06 | 27.42 | 3.60 | 5.83*** |
| *Intellectual vs action orientation* | 35.05 | 5.62 | 36.86 | 5.22 | 4.27*** |
| *Self-reflection* | 25.82 | 3.54 | 26.26 | 3.08 | 1.69 |
| *Openness to change* | 34.87 | 5.35 | 37.13 | 4.83 | 5.65*** |
| **Emotional Stability** | 112.84 | 18.82 | 122.67 | 16.51 | 7.13*** |
| *Sensitivity* | 27.54 | 6.69 | 24.22 | 6.00 | –6.72*** |
| *Self– confidence* | 25.94 | 3.74 | 27.78 | 2.94 | 6.94*** |
| *Susceptibility to stress* | 26.07 | 6.12 | 23.41 | 5.61 | –5.78*** |
| *Tolerance of frustration* | 20.52 | 5.63 | 22.52 | 5.01 | 4.80*** |
| **Conscientiousness** | 101.48 | 14.45 | 106.52 | 11.76 | 4.92*** |
| *Systematic approach* | 33.59 | 6.22 | 35.74 | 5.47 | 4.69*** |
| *Self-discipline* | 35.23 | 5.93 | 37.15 | 5.04 | 4.43*** |
| *Motivation to p erform* | 32.67 | 5.86 | 33.63 | 5.07 | 2.27* |
| **Extraversion** | 103.95 | 14.46 | 107.13 | 13.64 | 2.89** |
| *Enthusiasm* | 25.78 | 4.23 | 25.40 | 4.37 | –1.14 |
| *Sociability* | 23.17 | 5.42 | 23.93 | 5.12 | 1.84 |
| *Energy* | 33.03 | 4.88 | 34.44 | 4.33 | 3.89*** |
| *Assertiveness* | 21.97 | 4.59 | 23.36 | 4.00 | 4.12*** |
| **Agreeableness** | 123.64 | 13.19 | 122.38 | 11.96 | –1.29 |
| *Competitiveness* | 30.30 | 5.68 | 30.17 | 5.17 | –0.29 |
| *Focus on others* | 32.21 | 3.57 | 32.31 | 2.95 | 0.39 |
| *Trusting of others* | 37.22 | 5.32 | 37.51 | 5.01 | 0.73 |
| *Accommodating others* | 24.51 | 5.72 | 22.73 | 5.26 | –4.14*** |

Note: The table presents the mean (μ) and standard deviation (σ) of the other professionals and the internal auditors on the five traits and underlying nineteen sub traits. The Independent Sample t Test (t) is used to compare the means of the two independent groups to determine whether the population means are significantly different.
***p < 0.001, **p < 0.01 and *p < 0.05.

# 5. Conclusion and discussion

Section 5.1 discusses the conclusions on each of the five personality traits. In section 5.2, we present the implication for practice. Finally, section 5.3 describes the limitations and the suggestions for future research.

## 5.1 Conclusion

The central question in this study is whether internal auditors with respect to their personality are different from other professionals. The conclusion is that all hypotheses are accepted. Except for agreeableness, the four personality traits show higher levels for internal auditors as compared to the other professionals. Furthermore, the differences regarding extraversion are less convincing than for openness to experience, emotional stability and conscientiousness.

### 5.1.1 Openness

The results on the t-test for openness to experience show that the internal auditors score is significantly higher than the other professionals ($p < 0.001$). Furthermore, the sub-traits *'openness to change'* ($p < 0.001$), *'innovation orientation'* ($p < 0.001$) and *'intellectual versus action orientation'* ($p < 0.001$) are also significant. Only the sub-trait *'self-reflection'* was not significant. Overall, we can accept hypothesis 1.

The sub-trait *'self-reflection'* was not significantly higher. This means that there is no difference between internal auditors and other professionals in this respect. However, they seem to be more open to solving new or different problems (*'openness to change'*) and able to maintain a good overview. They are able to make abstract and conceptual analyses in order to make plans that they want to carry out. A high score on openness to experience has been shown to be positively related to searching methods that are characterized by thoroughness and having oversight: deep diving and broad scanning (Heinström 2005). Both are important to internal auditor's work in ensuring that they look for enough evidence to support their findings. Maintaining a good overview and having an open mind are also essential to an auditor's open conversation with the auditee and the avoidance of biases such as tunnel vision and framing (Heinström 2005; Cooperider et al. 2008). The results therefore illustrate that in the conditions of the current study, the internal auditors appear to be more in possession of these traits than the other professionals.

### 5.1.2 Emotional stability

For emotional stability, the t-test showed that internal auditors do score significantly higher ($p < 0.001$) on this trait than the other professionals. All four underlying sub-traits also tested as significant ($p < 0.001$), though it should be noted that for the sub-trait *'susceptibility to stress'* the internal auditors scored lower than the other professionals. Therefore, hypothesis 2 can be accepted.

The emotional stability of the internal auditors' scores are significantly higher than the other professionals, leading to the acceptance of the hypothesis. However, the score was not exceptionally high in general (both scored in what could be called the medium range of the full score spectrum). Looking at the significance of the scores on the sub-traits, we see that internal auditors scored significantly higher on *'sensitivity'*, *'self-confidence'*, and *'tolerance of frustration'*. However, the scores are significantly lower on *'susceptibility to stress'*. This means that internal auditors appear to be more confident, less easily stressed and less quickly frustrated, though also more negative in their thinking than other professionals.

In section 2.3.2, several elements have been identified which are important for competent task performance of internal auditors. For example, the internal auditor´s personality is expected not to be *'susceptible to stress'* in order to cope adequately with uncertainty; this leads to more source credibility (Falcione 1974). The results indeed support that auditors are more self-confident and emotionally stable, and therefore could be perceived as more credible. Being perceived as more credible is important to internal auditors in all stages of their work, but especially in the reporting stage when they have to convince and advise management.

### 5.1.3 Conscientiousness

The internal auditors scored significantly higher on conscientiousness than the other professionals ($p < 0.001$). This significance was also noted for all three of the underlying sub-traits of conscientiousness; *'systematic approach'* ($p < 0.001$), *'self-discipline'* ($p < 0.001$), and *'motivation to perform'* ($p < 0.05$). Though the p-values range from $p < 0.001$ to $p < 0.05$, it should be noted that all p-values of $p < 0.05$ and lower are considered statistically significant. As a result, hypothesis 3 can be accepted.

The results show that the internal auditors on conscientiousness, overall as well as on the sub-traits, score significantly higher than the other professionals. People who score high on conscientiousness tend to have more self-discipline and control. When reviewing the results, this suggests that the internal auditors would indeed be less surprised by sudden problems. It should be noted that though the internal auditor score is significantly higher than the other professionals, both have a score in the medium range of the overall spectrum.

### 5.1.4 Extraversion

The t-test comparing of the scores on the extraversion trait between the internal auditors and the other professionals showed that internal auditors scored significantly higher on this trait than the other professionals ($p < 0.01$). The underlying sub-traits *'energy'* ($p < 0.001$) and *'assertiveness'* ($p < 0.001$) were significant; the sub-traits of *'enthusiasm'*

and *'sociability'* were not. Due to the significance of the results on the three traits, hypothesis 4 can be accepted.

The sub-traits *'energy'* and *'assertiveness'* suggest that internal auditors are not afraid to share their opinion and are more action oriented than other professionals. Moreover, section 2.3.4 illustrated that a positive correlation exists among extraversion and information seeking behavior (Tidwell and Sias 2005; Heinström 2005; Halder et al. 2010) and broad scanning (Heinström 2005). This is an important information search strategy for auditors. Extraverted people are also more capable of persuading others (Oreg and Sverdlik 2014). The overall results are in support of these positive information seeking behaviors being present. Furthermore, we also see in the sub-traits energy and assertiveness significant differences. This indicates that the capability of persuading others is more present in internal auditors than in other professionals.

Moreover, we assume that *'enthusiasm'* and *'sociability'* are less relevant for the performance of a competent internal auditor.

#### 5.1.5 Agreeableness

The personality trait of agreeableness (altruism) did not show a significant difference. The hypothesis 5 can therefore be accepted. Within the sub-traits of agreeableness, only *'accommodating others'* ($p < 0.001$) was significant with a lower score for the internal auditors than the other professionals.

The results regarding agreeableness did not reveal significant differences between the internal auditors and the other professionals. In advance, it was assumed that no significant difference would be present on this particular trait. However, the sub-trait *'accommodating others'* showed for the internal auditor significantly lower scores. A high level of accommodating others is positively associated with conflict avoidance and clemency. Internal auditors are expected to be less likely to avoid conflicts (and more likely to confront) than other professionals, so a low score on accommodating others is desirable.

### 5.2 Implications

In practice, the insights that have been revealed in this study may have relevant implications for recruitment, performance management and training of internal auditors. From the exploratory research, we can conclude that internal auditors score significantly different as opposed to other professionals. It appears that there is a kind of general profile for internal auditors which differs from other professionals on several elements. If the personality of internal auditors can be adequately charted through a survey such as the PfPI, it could be useful in ensuring that new recruits in the internal auditing profession possess certain desirable traits that ensure optimal task performance. The results of the current study particularly emphasize the importance of openness to experience, emotional stability and conscientiousness.

Using a personality survey could help in predicting whether someone will be able to perform internal audit work adequately. Hogan et al. (1996) concluded that personality traits can be a useful predictor for organizational productivity. However, the use of such personality surveys should not be the only tool employed, due to the limitations of surveys. Previous research warns against solely relying on this kind of self-scoring instruments (Morgeson et al. 2007). In the current research, for example, we cannot estimate whether a person is actually effective in their daily work.

In addition to the use in recruitment, the results could be used in the training of internal auditors, knowing where to focus and to concentrate on areas of potential weaknesses. Also, through analysis of the personality traits on which internal auditors score high (for example more action orientated), it could be easier to set up tailored training sessions which are effective; this has also been implied in a meta-analysis performed by Barrick and Mount (2006) for a general population of professionals.

### 5.3 Suggestions for future research

The literature reviews showed that limited research has been done in the field of the internal auditor's personality. In addition, this empirical study shows that there are differences between internal auditors and other professionals. These conclusions itself may already be a reason to extend research in this relatively unexplored research area. Besides this general suggestion for future research, we focus on five particular points of research interest.

Firstly, the exploratory research was solely carried out in The Netherlands. In order to validate the findings of this study, the research should be expanded to other countries.

Secondly, an important question for further research is whether internal auditors are different in their personality traits due to the learning process and experiences in the auditing profession, or whether people who choose to become internal auditor tend to be people with certain personality traits. To analyze this, it would be interesting to look at differences between auditors with very little work experience and those with a broad experience. We can see from other research that there are differing results in trait development or the lack thereof. A study by Roberts et al. (2006) for example shows that people increase in extraversion, conscientiousness, and emotional stability from ages twenty to forty; with subsequent decreases shown later on in life. However, Costa et al. (1984) shows a strong correlation between the personality of students and their vocational interests, leading to think that the personality of a person leads them to choose a certain profession. These ideas are in accordance with the ASA theory (see section 3.1).

Thirdly, the study should expand to various aspects of internal auditor's work that become more relevant in senior positions within the internal audit profession. These aspects relate for example to leadership in internal auditing, ethical reasoning and conflict handling. The analysis should estab-

lish whether or not the identified differences are strengthened or may lead to completely other conclusions. Moreover, it could refine the insight into the degree to which the sub-traits should be present in a certain situation.

Fourthly, the element of gender is not specifically elaborated on in this paper and should be topic of further investigation. The results showed that female internal auditors are more similar to their male internal auditors than is the case of other professionals. This is strong evidence in support of the Attraction-Selection-Attrition model (see section 3.1). However, the detailed analysis of the current group of internal auditors also revealed some differences between men and women, most notably on emotional stability. Previous research also suggests differences between men and women on various personality traits, especially in European and American culture (Costa et al. 2001; Feingold 1994). Analyzing these differences further is essential if a personality survey would be used as an essential part of recruitment.

The final suggestion refers to the use of other research methods in addition to (self-scoring) surveys in studying personality. The current study focused on the use of a personality survey as a tool to analyze differences in personalities. However, surveys do have limitations (Morgeson et al. 2007). Therefore, we suggest to use other research methods (e.g. interviews, case studies) to further explore the differences noted in this study.


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## Acknowledgements

We mainly thank the research foundation of IIA in The Netherlands, the Foundation for Technical Research (SVO), who was the main sponsor of the research. The role of the sponsor was limited to funding the project. We would like to thank many people for their helpful comments on this paper.

## Notes

1. It is important to note that there is a difference between personality traits and states, as states often refer to mood states rather than to actual personality traits as they are meant in this paper.
2. Although this instrument is subject to considerable criticism (Pittenger 2005), the profiles of the MBTI are still widely used in practice to indicate personality differences between people.
3. These five factors differ from those eventually incorporated in the Five-factor model.
4. They removed the sub-traits 'control' and 'pro-activeness' from the original twenty-one indicators because they were redundant.
5. See Biggs et al. (1988) and Van Kuijck (1999) for background on the suggestion that auditing is an information processing activity.
6. We abstract from other aspects that may be require specific personality traits (e.g. conflict handling, negotiation, leadership).
7. For a better understanding of intolerance of uncertainty, Rosen et al. (2014) propose to identify three related constructs, i.e. intolerance of ambiguity, uncertainty orientation and need for cognitive closure.
8. In the study of Falcione (1974), 55% of the source credibility was explained by extraversion, emotional stability, competence and safety.
9. Abdolmohammadi et al. (2004) give an overview of attributes audit specialist should possess.
10. The ASA theory of Schneider (1987) suggests that individuals are attracted to organizations and professions where people work that are similar to themselves in terms of personality and other characteristics. As a result, the homogeneity of these aspects in a group is warranted.

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# Appendix I

The following nineteen personality sub-traits and categorisation is based on the description provided by De Fruyt and Rolland (2013):

**Openness**

- *Creativity and innovation mindedness*: People with a high score on this sub-trait are original and creative; whereas people with a low score are more likely to prefer solving problems which they are familiar with.
- *Intellectual versus action orientation:* People with a high score are thorough in their research but also able to maintain an overview; whereas people who score low are more practical in their approach.
- *Self-reflection:* People who score high on self-observation, tend to welcome and ask for feedback from others.
- *Openness to change:* People who score high on this sub-trait are open to change and more flexible than those who have a low score.

**Neuroticism/Emotional stability**

- *Sensitivity:* People who score high on sensitivity are more prone to negative emotions and feelings. They fluctuate more in their emotions and are more easily panicked than those who have a low score on sensitivity.

- *Self-confidence:* People with a high score on self-confidence are more confident in their decisions and are more comfortable with themselves.
- *Susceptibility to stress:* People who score high on this sub-trait are more likely to experience tension or stress.
- *Tolerance of frustration:* People who score high on tolerance of frustration are able to handle negative feedback and their emotions relating to frustration better than people with a low score on this trait.

**Conscientiousness**

- *Systematic approach:* High scoring people are well organized and more predictable than others who score low on this sub-trait.
- *Self-discipline:* People who score high on self-discipline tend to be good at motivating themselves to meet deadlines; whereas those with a low score are more easily distracted and procrastinate.
- *Motivation to perform:* People with a high score on this sub-trait want to achieve perfection and will enjoy acknowledgement more than those with a low score.

**Extraversion**

- *Enthusiasm:* People with a high score on enthusiasm are more optimistic and able to create and maintain a positive atmosphere.
- *Sociability:* People with a high score on sociability are able to approach others with ease and usually have a large social network; whereas people who have a low score tend to have difficulty approaching others.
- *Energy:* People who score high on energy tend to be very action orientated and need speed in those (physical) actions.
- *Assertiveness:* People who score high on assertiveness are likely to be the leader in groups and are dominant; whereas people low on assertiveness tend to have a low tendency to share their opinion.

**Agreeableness**

- *Competitiveness:* People with a high score on competitiveness are more orientated towards winning and comparing their accomplishments with others; whereas those who score low on competitiveness have a tendency to work together.
- *Focus on others:* People who score high on this sub-trait tend to care about others and listen to other people's viewpoints; whereas people who score low tend to have a more egocentric point of view.
- *Trust in others:* People who score high on trust in others, are more likely to perceive others as reliable and as a result are more open to them than those with a low score.
- *Accommodating others:* People with a high score on accommodating others tend to avoid conflicts; whereas those with a low score find it easy to confront others.