



Construct Validation of the ADEPT-15 Questionnaire in South Africa

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Abstract

Organisational success hinges upon the quality of its workforce, with talented employees serving as vital assets in driving productivity, innovation, and competitive advantage. Recognising the importance of identifying and nurturing talent, organisations often resort to psychometric assessments to assess employee performance and potential. The use of international tests has increased within the South African context due to the quality of their development process. However, lingering concerns persist regarding the degree to which these assessments measure the constructs they are intended to measure. This construct validation study examines the relationship between the Adaptive Employee Personality Test (ADEPT-15) assessment and the shapes (management) questionnaire, developed by Aon Assessment Solutions. The investigation focused on probing the convergent validity between the ADEPT-15 and the Aon shapes (management) questionnaire, both firmly grounded in the Five Factor Model (FFM) theoretical framework. Training delegates in South Africa (N = 545), completed both self-report assessments. A correlation analysis presented the relationships between the dimensions of the ADEPT-15 and the dimensions of the shapes (management), and a series of stepwise regression analyses demonstrated the amount of variance shared between each of the measures. Key findings of the study revealed that the collective variance across the ADEPT-15 dimensions accounted for by the subsets of the shapes (management) dimensions averaged 17.13%. This ranged from a minimum of 4% for the ADEPT-15 awareness dimension to a maximum of 32% for the ADEPT-15 conceptual and power dimensions. The findings offer valuable insights into the use of an international assessment within South Africa.

Keywords: The Adaptive Employee Personality Test, shapes (management) questionnaire, construct validity, psychometric testing in South Africa

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Chapter 1

1. Introduction

Organisational performance is not a chance event but a complexly determined variable consisting of an intricate combination of constructs that need to be understood. Although organisations differ in mission and purpose, the unique contribution of skilled and qualified employees remains a constant factor in their success. Human behaviour is intricately woven into the dimensions of organisational performance. The success of an organisation can be attributed to the calibre of its employees. Having a talented workforce, one that comprises skilled and qualified employees, is an effective method of gaining an advantage within the labour market, as these employees play a crucial role in driving their organisation's success (Golik & Rita Blanco, 2014; Mwila et al., 2018; Vaiman et al., 2017).

Talented employees provide their organisations with a competitive advantage in the market through their higher levels of productivity, innovation, and creativity (Klett & Wang, 2013). It can therefore be argued that one of the single most predictive measures of an organisation's likely success can be determined by the quality of its talent pool.

Measuring employee performance is therefore vital as it enables organisations to identify and develop talented employees as well as predict their future performance (Bartram, 2004; Kabalina & Osipova, 2022; Kgosana, 2012). One way in which organisations can achieve this is by making use of psychometric assessments in their talent management practices. Psychometric assessments are instruments psychologists use to measure an individual's cognitive ability, personality, and behavioural preferences (Donald et al., 2014b; Mwila et al., 2018). The range of assessments includes tests, questionnaires, simulations, and exercises. A psychometric test can be defined as a tool used to describe an individual's current behaviour and predict future behaviour by collecting information on a sample of behaviour (Donald et al., 2014b). A key component of psychometric tests is that the tests are standardised and are scored using clearly defined rules (Donald et al., 2014b).

Organisations need to attract, recruit, and retain the best talent. The main goal of employee selection processes, procedures, and talent management practices is to determine which individual or individuals from a pool of applicants will perform the best in a role and subsequently help the organisation achieve its success metrics (Shockley et al., 2017). Similarly, the failure of an organisation is often attributed to the inability to recruit the right candidates and the failure to predict a candidate's likelihood of success in an assigned role

(Alhendi, 2019). People are therefore considered one of the most vital resources an organisation possesses.

1.1 Predicting Performance

Employee performance is a complex phenomenon and therefore cannot be solely determined or predicted by a single indicator such as an employee's qualifications or general mental ability. Additionally, there is no single acceptable definition of successful job performance, as this is largely determined by each organisation and is also role-specific within organisations (Shockley et al., 2017). However, research indicates that psychological assessments, specifically instruments used to measure an individual's personality traits, can be used to predict future job performance (Alhendi, 2019).

Personality can be defined as "a relatively stable and consistent set of traits that interact with environmental factors to produce emotional, cognitive and behavioural responses" (Shockley et al., 2017, p.153). By making use of personality tests, organisations can gain insights into prospective employees' interests and motivation and how they are likely to behave in various contexts (Ritz et al., 2023; Roberts & Yoon, 2022). Consensus exists regarding the importance of personality testing to ensure that the right individuals are chosen for the job (Shockley et al., 2017).

The use of personality assessments, and more broadly psychometric assessments, has been a highly debated topic (Donald et al., 2014b; Foxcroft, 1997; Laher & Cockcroft, 2019). Debates centre around issues of validity, specifically whether the assessments are accurate and measure what they say they measure (Ihsan & Furnham, 2018; Scroggins et al., 2009). Concerns have been raised about fairness and discrimination issues (Foxcroft, 1997; Laher & Cockcroft, 2019; Scroggins et al., 2009) associated with the use of assessments, especially in South Africa. This is particularly relevant when using psychometric assessments to predict future job performance.

The following sub-section will provide an overview of the development and history of psychometric assessments in South Africa. Additionally, it will discuss some of the ongoing debates around fairness, discrimination, and validity. Lastly, it will highlight some of the measures put in place to address the above concerns.

1.2 Psychometric Assessments in South Africa

The use of psychometric assessments in organisations is rapidly increasing in South Africa, and organisational leaders and HR professionals must understand their implications.

However, this growth has not been without resistance. The application of these assessments in organisational contexts remains a highly debated and contentious topic, largely due to their association with South Africa's troubled history (Donald et al., 2014b; Foxcroft et al., 2004; Laher & Cockcroft, 2014). Assessments are not developed in a vacuum. On the contrary, they inevitably reflect the society in which they are created. Consequently, during apartheid, psychological assessments were influenced by policies that reinforced inequality and racial segregation (Foxcroft, 2008; Laher & Cockcroft, 2019). During apartheid, resources were not distributed equitably but were allocated along racial lines (Foxcroft, 2008; Laher & Cockcroft, 2019). Likewise, access to education and job opportunities was also restricted, with policies favouring white individuals over people of colour (Foxcroft, 2008; Laher & Cockcroft, 2019). Job policies were designed to provide access to employment to white people while other racial groups had limited employment opportunities. Additionally, psychological assessments were used to justify the unequal distribution of resources and deny access to employment opportunities based on race and gender (Kgosana, 2012; Laher & Cockcroft, 2014, 2019).

The abolishment of apartheid in 1994 necessitated a review and dismantling of discriminatory practices, in favour of addressing previous injustices (Kgosana, 2012; Paterson & Uys, 2005). Specifically, there was a call for research to be conducted in the field of psychology, regarding the use of psychometric assessments and tests (Donald et al., 2014; Foxcroft et al., 2004; Laher & Cockcroft, 2019). Local practitioners focused their efforts on ensuring that assessments and tests used in the workplace were reliable, valid, fair, and unbiased (Laher & Cockcroft, 2019; Paterson & Uys, 2005). This change in focus was further supported and enforced by legislation. Specifically, Section 8 of the Employment Equity Act No. 55 of 1998 highlights the conditions in which psychometric testing may be conducted.

'Psychometric testing and other similar assessments of an employee are prohibited unless the test or assessment being used (a) has been scientifically shown to be valid and reliable; (b) can be applied fairly to all employees; and (c) is not biased against any employee or group' (Laher & Cockcroft, 2019, p. 4).

1.3 Selection of Tests

Internationally, substantial evidence shows that well-designed occupational assessments generally provide accurate and reliable objective data for personnel decision-making, whether for selection, development, or promotion (Cottrell et al., 2016). Before using a specific test or assessment, it is crucial to determine its relevance and suitability for the

intended purpose. This is particularly important in a selection process, where the relevance of a test is typically demonstrated through job analysis. Job analysis plays a key role in this, as it identifies the personal attributes and competencies necessary to perform the job in question. Best practice guidelines for using assessments in the workplace stress the importance of conducting validation research before implementing tests, to ensure their appropriateness and fairness for the intended purpose (Society for Industrial and Organizational Psychology, 2018; Society for Industrial and Organizational Psychology of South Africa, 2005).

Although legal steps have been put in place to ensure that assessments do not unfairly discriminate, there are persistent concerns regarding assessments, especially those developed by international test providers, and whether these assessments can function as intended when administered in culturally diverse settings (Donald et al., 2014b; Huysamen, 2002; Laher & Cockcroft, 2019). Laher and Cockcroft (2019) do, however, argue that while assessments are not perfect, they are still among the most reliable and valid measures of assessing employee behaviour. Therefore, to address concerns around the use of assessments in South Africa, it is essential to investigate the reliability and validity of assessments and to use well-established tests. Therefore, this dissertation will examine Aon's globally developed personality measure, the Adaptive Employee Personality Test (ADEPT-15), developed by an international test provider and administered in South Africa. The study examines whether the ADEPT-15 questionnaire retains its validity when administered in South Africa.

1.4 Research Question

Does the ADEPT-15 questionnaire measure the same constructs as the shapes (management) questionnaire?

1.5 Structure of this Dissertation

This chapter introduces the study and outlines the rationale for conducting the research. It concludes with the presentation of the research question to be investigated. Chapter 2 provides an overview of the existing literature on the research topic and identifies current gaps. Following the literature review, the methodology chapter outlines the research design, approach, participants and sampling, measures, procedure, ethical considerations, and statistical analyses. The findings of the study are then presented in the results chapter. Lastly, the discussion chapter explores how the results relate to the literature and addresses the limitations of this research, offering recommendations for future studies.

Chapter 2

2. Literature Review

This chapter provides a brief overview of the history of personality assessments in the workplace. The Five Factor Model (FFM) is introduced as a well-established and widely used model of personality. This is followed by a discussion on the two modern-day personality assessments that are the focal point of this study: the ADEPT-15 and the Shapes (Management) Questionnaire. The chapter concludes with the presentation of plausible hypotheses for investigation in this study.

2.1 Literature Search

The literature review primarily focused on research produced between 2013 and 2023. However, there were some instances where research and sources dated older than ten years were included. These older sources provided valuable and insightful perspectives on the topic, enriching the overall review. The sources were obtained from academic databases including Google Scholar, AOSIS OpenJournals, Business Source Premier, PsycINFO, and Wiley Online Library. The search terms used included academic databases including Google Scholar, AOSIS OpenJournals, Business Source Premier, PsycINFO and Wiley Online Library. Search terms used to generate relevant information include terms such as history of psychometric assessments, history of psychometric assessments in South Africa, use of psychometric assessments in business, predicting job success through personality, personality, personality assessments, personality tests, personality psychology, personality and job success, ADEPT-15, the Adaptive Employee Personality Test, construct validity studies on the ADEPT-15, use of the Adaptive Employee Personality Test in business, the Five Factor Model, computer adaptive testing in psychometric assessments, Aon shapes management questionnaire, shapes management personality questionnaire, construct validation studies. Additional references were obtained by reviewing the citations of the articles included.

2.2 Personality Assessments in the Workplace

The idea that individuals are unique existed before psychology was practised as a formal science (Weiner & Greene, 2008). Distinct personality differences have been portrayed from as early as the Greek tragedies to modern fiction (Weiner & Greene, 2008). Likewise, using personality assessments in the workplace has been an ongoing practice for many years (Church et al., 2016). Before discussing personality assessments, this dissertation will present a definition of personality.

Personality assessments are tests and tools that are used to uncover dimensions of individuals' personalities to determine how those individuals are likely to behave, think, and feel (Weiner & Greene, 2008). Personality assessments play a vital role in the science of psychology and the practice of the field by shedding light on the differences that exist between individuals and predicting their behaviour (Weiner & Greene, 2008). The following paragraphs in this section will provide a brief history of the development of personality assessments in the workplace.

While organisations have experienced a surge in the adoption and utilisation of personality assessments in recent times, it is noteworthy that these assessments have a longstanding history (Church et al., 2016). The use of personality assessments has been a core component of the profession of industrial-organisational psychology for over 85 years (Church et al., 2016). The Psychoneurotic Tendencies developed by Woodworth was an important early contribution to workplace personality assessments conducted in 1917 (Church et al., 2016; Weiner & Greene, 2008). The assessment was used as a screening tool for US military recruits. It measured the likelihood of developing a nervous breakdown due to enemy bombardment (Church et al., 2016; Weiner & Greene, 2008). Woodworth would go on to adapt the Psychoneurotic Tendencies to screen out poorly adjusted individuals in the workplace. The instrument was renamed the Woodworth Personal Data Sheet (Church et al., 2016). The Woodworth Personal Data Sheet, among other assessments measuring maladjustment in the workplace, (e.g., the Cross-out tests for investigating Emotions; Pressey & Pressey, 1919; and Mental Hygiene Inventory; House, 1927), formed the foundation for measuring personality derailers (Church et al., 2016; Coleman et al., 2023). Personality derailers are defined as personality traits and behaviours that negatively impact an individual's adjustment or performance in the workplace (Church et al., 2016; Coleman et al., 2023). Personality assessments were therefore initially used as a screener for identifying people possessing negative or unwanted personality traits (Church et al., 2016).

Throughout time, personality measures have evolved to encompass a broader understanding of personality beyond certain factors that might impede it. This expansion dates back to the development of assessments like the Bernreuter Personality Inventory in 1931 and the Humm-Wadsworth Temperament Scale in 1934. These early assessments paved the way for the creation of more comprehensive workplace assessments such as the Myers-Briggs Type Inventory (1944), and the Sixteen Personality Factor Questionnaire (Cattell and Mead, 1949). The 1940s and 1950s marked a period of significant growth in workplace personality

assessments, despite facing resistance and criticism related to their application, validity, and a shift in focus from personality traits to situational determinants of behaviour. While facing challenges during this time, the 1980s saw a resurgence of interest in personality assessments due to the efforts of industrial-organisational psychologists who conducted validation studies and improved the analysis of constructs. As a result, understanding of the relationship between personality traits (predictors) and behaviour (criterion) improved, leading to a decrease in criticisms regarding the validity and utility of personality assessments. Following this resurgence, personality assessments became a central aspect of the work of industrial-organisational psychologists, leading to increased research, the development of new personality assessment tools, and the introduction of legislation to protect individuals undergoing psychometric testing. Subsection 2.3 will provide information on the five-factor model (FFM), a dominant theoretical model of personality measurement.

2.3 The Five Factor Model

Various theoretical models have been used to guide personality measurement such as the social learning theory, trait theory, personal construct theory and the FFM (Church et al., 2016). In this dissertation, the exploration of theoretical models of personality will centre on the FFM in light of its relevance to the personality measures examined in this study (ADEPT-15 and shapes [management]).

The Five Factor Model (FFM) is a widely used model for personality measurement (Shockley et al., 2017). It has been extensively researched and applied since the 1990s (Bradburn et al., 2020; Cottrell et al., 2016). The FFM measures personality traits such as Extraversion, Neuroticism, Agreeableness, Conscientiousness and Openness to Experience (Bradburn et al., 2020; Cottrell et al., 2016). These broad personality traits, which focus on the bright side of personality, are often a focal point of discussions on personality in organisations (Bradburn et al., 2020; Church et al., 2016; Cottrell et al., 2016).

The FFM model has had a profound impact on the field of personality research for several reasons. Firstly, it has helped researchers and practitioners determine whether a new trait is indeed new or whether it is a facet of the broader five personality dimensions (Roberts & Yoon, 2022). Secondly, research conducted on the FFM has contributed significantly to the field of industrial-organisational psychology by providing empirical support for the hypothesis that personality is a good predictor of job performance (Bradburn et al., 2020; Roberts & Yoon, 2022). However, the FFM has not been without criticism. There are arguments advocating for the incorporation of additional dimensions into the FFM, as the existing five factors may not

adequately address certain dimensions, such as the construct of honesty, for example (Roberts & Yoon, 2022).

While the FFM has served as the primary foundation on which other personality assessments have been developed, there has been a need for other personality assessments to expand on the foundations of the FFM (Bradburn et al., 2020; Cottrell et al., 2016). Aon's recently developed global personality assessment, the ADEPT-15, is one such assessment modelled mainly on the FFM but intended to be a more comprehensive measure of personality (Boyce & Capman, 2017; Cottrell et al., 2016).

2.4 Computerised Adaptive Testing (CAT)

Integrating computers in developing and administering personality assessments brought about numerous possibilities (Rudick et al., 2013; Hol et al., 2008). This technological advancement facilitated the conversion of traditional paper and pencil personality tests, thereby improving accessibility (Hol et al., 2008). The efficiency of personality tests increased due to decreasing the costs of scoring errors, increased standardisation of test administration, enhanced test security, and accelerated test completion times (Hol et al., 2008). Additionally, computerised testing allowed for developing and administering more sophisticated and advanced personality assessments that could not be implemented via paper and pencil administration (Hol et al., 2008).

Computerised adaptive testing (CAT) extends these benefits further by tailoring assessments to the individual completing an assessment (Rudick et al., 2013). With traditional P&P assessments, individuals complete the same set of items in the test in the same order (Rudick et al., 2013). As such, the order of the test items remains the same for everyone regardless of each individual's responses to the items (Rudick et al., 2013). However, with CAT, items can be tailored to be unique and specific to each individual and their subsequent responses (Rudick et al., 2013). It is important to note that a computer-based assessment can be either adaptive or non-adaptive. A non-adaptive computerised test would be one where individuals are presented with the same items in the same order despite any differences in individual responses to the items.

The use of computers for personality testing brought about benefits for the application of item response theory (IRT) (Hol et al., 2008). With IRT, different sets of items or questions in a personality test could be used to estimate the trait levels of different individuals being assessed (Hol et al., 2008). It also allowed researchers and practitioners to identify and

determine the items that provide the most information on a particular trait (Hol et al., 2008). In practical application, IRT operates by continually estimating an individual's trait level each time they respond to an item. The selection of the subsequent item to be administered is determined by choosing the item from the item bank that offers the maximum information at that particular stage of the assessment (Hol et al., 2008). This underscores the significance of administering items that are most informative about the individual (Hol et al., 2008). This facilitates more accurate or predictive measurement of one's personality, using fewer items than paper and pencil tests, as the candidate is presented with items that are most applicable to them (Hol et al., 2008). The rapid changes in technology have greatly influenced the landscape of personality testing and this has paved the way for the introduction of some of today's more modern and latest personality tests such as the ADEPT-15 (Boyce & Capman, 2017).

2.5 The Adaptive Employee Personality Test (ADEPT-15)

The ADEPT-15 represents a pioneering personality assessment developed by industrial and organisational (I/O) psychologists affiliated with Aon (Boyce & Capman, 2017; Bradburn et al., 2020). The assessment was designed based on the latest psychometric research on the FFM and leadership traits as well as CAT technology. This assessment is designed for global high-volume screening, professional-level assessment, and leadership development. The ADEPT-15 is a scientifically based assessment designed to uncover 15 dimensions of an individual's personality to help organisations hire, promote, and develop the best talent (Boyce & Capman, 2017; Bradburn et al., 2020; Cottrell et al., 2016). The instrument has been administered to over 8 million test takers globally (Boyce & Capman, 2017).

The assessment is designed for use across industries and roles (e.g., executive, managerial, professional). It is suitable for talent acquisition, leadership development and coaching, team effectiveness interventions, and more. Before the development of the ADEPT-15, Aon had not previously developed a propriety broad-based personality assessment. Instead, they partnered to use third-party personality assessments (Boyce & Capman, 2017). Aon recognised unmet needs within the realm of third-party personality assessments (Boyce & Capman, 2017). First, the team of I/O psychologists determined that in some cases, personality assessments were not modelled on the latest conceptualisation of the FFM (Boyce & Capman, 2017). After developing personality assessments, mappings to the FFM were conducted, contrary to the Aon IO psychologists' assertion that this should precede development (Boyce & Capman, 2017). Second, the team determined that existing personality assessments did not adequately assess leadership traits which were a focal point of interest for Aon's clients (Boyce

& Capman, 2017). Third, at the time of the development of the ADEPT-15, there were no commercial personality assessments in the market that utilised multidimensional CAT for personality dimensions made feasible by advancements in IRT technology (Boyce & Capman, 2017).

2.5.1 Development and Theoretical Roots of the ADEPT-15

The personality model for the ADEPT-15 was initially developed from a set of 433 unique adjectives and statements compiled from seven different models of personality (Hogan's HPI and MVPI, OPQ-32, 16PF, Facet-5, IPIP and NEO-PI) (Boyce & Capman, 2017; Cottrell et al., 2016). Fifty-eight additional descriptive statements were obtained from a survey that comprised coaches and experts within the field of leadership development from countries such as the United States, England, China, India, Germany, Australia, Germany, Austria, Singapore, Thailand, and Dubai (Boyce & Capman, 2017). Four hundred ninety-one adjectives and descriptive statements were initially mapped to 10 dimensions of personality that map directly to the FFM (Boyce & Capman, 2017). The remaining adjectives and descriptive statements were then grouped based on their conceptual similarities and included in the personality model as five additional dimensions (Humility, Power, Awareness, Ambition and Mastery) (Boyce & Capman, 2017).

The assessment was developed by splitting each of the Big-5 factors of personality into two facets, with an additional five measures that factor into individual differences as shown in Table 1 (Boyce & Capman, 2017). The five measures are derived from McClelland's need for ambition and power; mastery goal orientation; humility and awareness (Boyce & Capman, 2017). Boyce and Capman (2017) have suggested that the ADEPT -15, with its focus on dynamic personality traits such as ambition and power, is a valuable instrument for evaluating individuals in senior positions within organisations. This emphasis on practical application underscores the relevance of the research in assessing individuals' preference for effectively assuming leadership positions.

Table 1*Linkage Between Aon's Personality Model and the Five-Factor Model*

Style	Dimensions	Mapping to the FFM
Adaptation Style	Conceptual	Openness to Experience
	Flexibility	Openness to Experience
	Mastery	Unmapped to FFM
Task Style	Structure	Conscientiousness
	Drive	Conscientiousness
Interaction Style	Assertiveness	Extraversion
	Liveliness	Extraversion
Teamwork Style	Sensitivity	Agreeableness
	Cooperation	Agreeableness
	Humility	Unmapped to FFM
Emotional Style	Composure	Emotional Stability
	Positivity	Emotional Stability
	Awareness	Unmapped to FFM
Achievement Style	Ambition	Unmapped to FFM
	Power	Unmapped to FFM

Note. Adapted from "ADEPT-15 Technical Documentation" by A.S. Boyce, & Capman, 2020, p.16. Copyright 2022 by Aon Inc.

The 15 traits are grouped into six higher-order styles; Adaptation, Task, Achievement, Interaction, Emotional and Teamwork (Boyce & Capman, 2017; Cottrell et al., 2016). Definitions for each of the 15 dimensions are provided in Table 2 below.

Table 2*Aspect Descriptions of ADEPT-15*

ADEPT-15 Aspect	Description
Drive	Drive assesses reliability and task focus. Those who fall toward the higher end tend to be dependable, hardworking, and accountable, but may get overly focused on narrow goals and task accomplishment. Those who fall toward the lower end tend to be more relaxed and shift more easily from goal to goal, but also tend to be less deadline-oriented and task-focused.
Structure	Structure reflects the extent to which someone is planful, detail-oriented, and rule-conscious. On the higher end, people tend to be careful, detail-focused, and orderly, but also may be seen as perfectionists. On the lower end, people tend to focus on the big picture and are comfortable with ambiguity, but also tend to be disorganised and less planful.
Conceptual	Conceptual is about being intellectually curious and imaginative. Those on the higher end tend to be inquisitive and creative but may be overly abstract and unrealistic. Those on the lower end tend to be concrete and practical, but more conventional and less curious.
Flexibility	Flexibility assesses adaptability and open-mindedness. People on the higher end tend to be open to new ideas and experiences but may come off as inconsistent or easily bored. People on the lower end may be more predictable as they seek tried-and-true approaches but can be inflexible and set in their ways.
Mastery	Mastery measures the extent to which someone is learning-oriented and improvement-focused. Those who fall toward the higher end tend to be focused on self-development, practicing improving over time, and the belief that others can improve; though they may be unrealistic in their views of others or their own potential. Those who fall toward the lower end are often more focused on getting things done and doing what they are good at; though they tend to be less concerned with continual self-development and believe people's skills do not often change much over time.
Ambition	Ambition reflects the extent to which someone is career-oriented and focused on achieving ambitious goals. People on the higher end tend to focus on career achievements and are relentless in their pursuits, may be obsessive and may pursue individual goals in lieu of team goals. People on the lower end are often more content with their current career status and generally have a good work-life balance but may be less interested pursuing challenging goals.
Power	Power is the degree to which someone is controlling, directive, and motivated to lead. Those who fall toward the higher end tend to be interested in leadership, control, and influence. Those who fall toward the lower end tend to be team players, lead by example, and are willing to let others to take control.
Assertiveness	Assertiveness is the extent to which someone is outspoken, dominant, and socially confident. Those falling toward the higher end are often bold and decisive but can be confrontational and aggressive. Those falling toward the lower end tend to be more cautious in sharing their opinions and are less likely to offend others but may give in too easily and appear indecisive at times.
Liveliness	Liveliness measures how outgoing and energetic someone seems. People on higher end tend to be sociable and friendly, though they may be seen as rambunctious and attention seeking. People on the lower end tend to be more reserved and quieter, but also more comfortable being by themselves and working alone.
Composure	Composure is the degree to which someone is calm and even-tempered. People toward the high end tend to be emotionally controlled and calm under pressure but can seem aloof and dispassionate. People toward the low end tend to demonstrate passion and excitement but may also be seen as irritable and unpredictable.
Positivity	Positivity reflects the extent to which someone is happy, optimistic, and resilient. Those who fall on the higher end tend to be hopeful and positive but may downplay or disregard potential problems. Those who fall on the lower end tend to be realistic and recognise potential drawbacks but may also be seen as pessimistic and anxious at times.
Awareness	Awareness speaks to one's willingness to reflect and be self-aware. On the higher end people tend to be introspective and know their own strengths and weaknesses but may be too self-critical. On the lower end

people may have a static self-concept and be resistant to feedback yet are less concerned with or care what others think about them.

Cooperativeness	Cooperativeness reflects on whether people are cooperative and trusting. People who score higher tend to be team-oriented and accommodating but can sometimes be taken advantage of by others. Those who score lower tend to be more independent, often prefer working alone, and are generally less interested in teamwork and collaboration.
Sensitivity	Sensitivity is the extent to which someone is sympathetic, caring, and understanding. Those who score higher tend to be kind, compassionate, and tolerant, but may have difficulty providing negative feedback or being firm with others. Those who score lower tend to be tough-minded and unsentimental, but also candid and direct.
Humility	Humility combines modesty and sincerity. Higher scorers tend to be humble and honest but may be less effective in advocating for their own interests at work. Lower scorers tend to be proud, cunning, and effective at managing situations requiring tact and posturing, but can also be seen manipulative at times.

Note. Adapted from “ADEPT-15 Technical Documentation” by A.S. Boyce, & Capman, 2020, p.16. Copyright 2022 by Aon Inc.

The ADEPT-15 was designed to help talent practitioners and decision-makers make informed decisions when it comes to employee selection and development (Boyce & Capman, 2017). This is made possible using CAT technology and multidimensional pairwise preferences (Cottrell et al., 2016). The ADEPT-15 personality tool comprises an item pool of 300 000 unique statement pairs to measure the unique dimensions of personality (Boyce & Capman, 2017; Cottrell et al., 2016). The use of such technology and the large item pool helps mitigate faking (Boyce & Capman, 2017; Cottrell et al., 2016). It would seem that limited empirical studies exist that investigate the psychometric properties of the ADEPT-15. A comprehensive examination of the extant personality literature via a desktop review¹ revealed a paucity of validation evidence.

2.6 Construct Validity

Construct validity concerns the degree to which a test or assessment measures the construct (or constructs) it is intended to measure (Strauss & Smith, 2009). Evidence of construct validity is demonstrated by evaluating the convergent and discriminant validity of a measure (Strauss & Smith, 2009):

Convergent validity assesses how closely a test correlates with other measures of similar constructs. It provides evidence that the assessment is indeed measuring the intended construct by showing significant relationships with other measures of the same or very similar constructs. Discriminant validity, on the other hand, examines whether a test can differentiate

¹ Please note that this review was not a systematic review.

between the construct it intends to measure and unrelated constructs. It is established by demonstrating that the assessment does not correlate significantly with measures of unrelated constructs.

In occupational assessments, particularly in the context of the ADEPT-15, much emphasis is placed on demonstrating convergent validity. This involves comparing the measures of personality constructs within the ADEPT-15 against other established personality assessments that measure similar constructs. For this study, the shapes (management) questionnaire has been selected as a tool to investigate and establish the construct validity of the ADEPT-15.

2.7 The shapes (management) questionnaire

The shapes (management) questionnaire was developed by cut-e (acquired by Aon), an international test provider located in Hamburg, Germany. Cut-e as a test provider, develops assessment solutions aimed at solving their client's challenges and improving the performance of employees (Aon, 2022). Before the ADEPT-15 questionnaire was released, their flagship personality assessments were the shapes questionnaires (basic, graduate, expert, management, executive and sales). For this dissertation, the shapes (management) questionnaire will be explored further.

The shapes (management) questionnaire was designed to provide insights into an individual's suitability for a management role in an organisation (Aon, 2019). The questionnaire is based on Aon's adaloc technology, which allows personality dimensions to be linked and adapt the tests to the test taker's responses. The questionnaire was developed to provide clients with an assessment that is reliable, valid, and easy to integrate (Aon, 2022). The questionnaire comprises a personality model covering 18 personality dimensions (Aon, 2022). Based on the scores derived from the personality dimensions, one's level on the 18 competencies can be predicted (Aon, 2022). Test takers' strengths and development areas can therefore be predicted based on the relationship between the personality dimensions and the work-related behaviours (Aon, 2022). The assessment is engaging and can be administered on several devices (desktops, laptops, tablets, and smartphones).

2.7.1 The shapes (management) Competency Model

The construction of the shapes (management) competency model focused on a two-fold approach comprising a conceptual and empirical focus (Aon, 2022). The conceptual approach focused on literature reviews to gather insights and information on existing competency models

that were in use (Aon, 2022). The empirical approach consisted of 300 interviews, which were conducted either through the critical incident technique or repertory grid and an additional 50 visionary interviews (Aon, 2022). All the competencies collected via both exercises were then reduced through qualitative content analysis to retain the core competencies contributing to management performance (Aon, 2022).

Table 3*Dimension Descriptions of the shapes (management) Questionnaire*

Dimension	Definition
Directing	Likes to be in charge; leads and directs others; keeps a team focused on objectives
Persuasive	Enjoys selling and negotiating; finds it easy to persuade others; influences others and wins their support
Socially confident	Comes across as confident and self-assured; feels at ease during presentations and formal events
Sociable	Is talkative, lively and sociable; enjoys being in groups; entertains others and has a wide network of contacts
Agreeable	Is team-oriented and considerate; enjoys working with others; is supportive and pleasant to be with
Behavioral	Is interested in others' behavior; observes and analyses others' motives and reactions
Prudent	Takes a broad perspective; considers the wider consequences of plans and activities
Focused on results	Is pragmatic and target-oriented in approach; focuses on reaching results; solves problems quickly and effectively
Systematic (Decisive)	Is systematic and well organised; defines clear priorities; plans well ahead and with realistic timescales
Conscientious	Takes care to follow procedures; respects rules and regulations; sees jobs through to the end and pays attention to quality issues
Analytical	Quickly grasps complex issues and problems; identifies the core of a problem; evaluates information thoroughly
Conceptual	Enjoys working with concepts, models and strategies; likes intellectual challenges
Imaginative	Can think out of the box; develops imaginative and original ideas and solutions
Open to change	Supports new ideas; enjoys change and novelty; continually looks for ways to improve things
Autonomous	Acts on own initiative; follows own direction; expresses own views and opinions freely
Achieving	Sets self-demanding targets; enjoys difficult challenges; wants to get ahead and succeed
Competitive	Likes to compete against others; is determined to win; enjoys talking about own achievements
Energetic	shows drive and determination; takes an energetic approach to work; remains focused and in control under pressure

Source. Adapted from 'shapes (management) Technical Documentation version 3.0 2022/04/07' by Aon, 2022, p.10.

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The personality dimensions map onto the 18 competencies as shown in Table 3 where two or three personality dimensions load on each competency (Aon, 2022). To illustrate this further, in Table 3 it is shown that the dimensions 'focused on results', 'autonomous' and 'achieving' have positive loadings on the competency 'Initiative and Responsibility'.

Therefore, an individual that scores highly on those three personality dimensions is predicted to perform well on tasks represented by the competency ‘Initiative and Responsibility’. The opposite would be true as well, with an individual scoring low on those personality dimensions being expected to perform poorly on tasks that are represented by the competency of ‘Initiative and Responsibility’.

Table 4

Mapping of shapes (management) Personality Dimensions on the shapes (management) Competency Model

Competency	Dimension
Vision and Strategy	+ prudent, ++ conceptual, + imaginative
Initiative and Responsibility	+ focused on results, ++ autonomous, ++ achieving
Business Development	+ persuasive, + achieving, ++ competitive, + energetic
Bottom-line focus	++ focused on results, + systematic
Influence	++ persuasive, + socially confident
Networking	+ socially confident, ++ sociable
People management	++ directing, + persuasive, ++ socially confident
People development	+ agreeable, ++ behavioural, + imaginative
Organisational awareness	++ sociable, behavioural, ++ prudent
Execution	+ focused on results, + conscientious, -- autonomous
Systematic approach	+ prudent, ++ systematic, ++ conscientious
Steadiness	+ socially confident, + behavioural, + energetic
Analysis and Judgement	+ prudent, + conscientious, +++ analytical
Professional expertise	+ analytical, + conceptual, ++ achieving
Innovation	+++ imaginative, ++ open to change, + autonomous
Effective communication	++ persuasive, + behavioural, ++ conceptual
Constructive teamwork	+ sociable, ++ agreeable, - competitive
Self-development	+ behavioural, + open to change, ++ achieving

Source. Adapted from ‘shapes (management) Technical Documentation version 3.0 2022/04/07’ by Aon, 2022, p.11.

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The shapes (management) questionnaire presents itself as an apt instrument to use to examine the construct validity of the ADEPT-15. This is attributable to the questionnaire’s alignment with the eight-factor model, encompassing the Big Five Factor model. Consequently, a positive correlation is anticipated between certain constructs derived from both assessments (Aon, 2022). Secondly, standardisation and validation studies have been completed on the shapes (management) assessments by universities and partners of Aon including studies conducted by the research and development team at TTS (Aon, 2022).

2.8 Research Aim

Assessments are not infallible; when administered in a different context from where they were developed, their validity and reliability can be questioned. Therefore, it is crucial to conduct reliability and validity studies on global assessments to determine if the constructs of interest retain their validity across different contexts. Given that the ADEPT-15 is a newly developed global personality assessment, this study aims to evaluate whether its constructs accurately measure the intended traits within the South African context. This aim will be achieved by examining the relationship between the ADEPT-15 and the Shapes (Management) Questionnaire. The following subsection will present the hypotheses for investigation in this study.

2.9 Hypotheses

A priori hypotheses were developed by the researcher based on similarities in definitions between some of the constructs measured by the ADEPT-15 and the shapes (management) questionnaire. The hypotheses were developed based on the researcher's prior assumptions that there would be a strong relationship between the constructs of interest due to perceived overlaps in the definitions of the constructs as shown in Table 5.

Table 5*Definition Comparison Table Between the ADEPT-15 and shapes (management)*

ADEPT-15	Definition	Shapes (management)	Definitions
Drive	Drive assesses reliability and task focus. Those who fall toward the higher end tend to be dependable, hardworking, and accountable, but may get overly focused on narrow goals and task accomplishment.	Achieving	Sets self-demanding targets; enjoys difficult challenges; wants to get ahead and succeed.
		Focused on Results	Is pragmatic and target-oriented in approach; focuses on reaching results; solves problems quickly and effectively.
Conceptual	Conceptual is about being intellectually curious and imaginative. Those on the higher end tend to be inquisitive and creative but may be overly abstract and unrealistic.	Conceptual	Enjoys working with concepts, models and strategies; likes intellectual challenges.
Flexibility	Flexibility assesses adaptability and open-mindedness. People on the higher end tend to be open to new ideas and experiences but may come off as inconsistent or easily bored.	Open to Change	Supports new ideas; enjoys change and novelty; continually looks for ways to improve things.
		Imaginative	Can think out of the box; develops imaginative and original ideas and solutions.
Ambition	Ambition reflects the extent to which someone is career-oriented and focused on achieving ambitious goals. People on the higher end tend to focus on career achievements and are relentless in their pursuits, may be obsessive and may pursue individual goals in lieu of team goals.	Focused on Results	Is pragmatic and target-oriented in approach; focuses on reaching results; solves problems quickly and effectively.
		Achieving	Sets self-demanding targets; enjoys difficult challenges; wants to get ahead and succeed.
Power	Power is the degree to which someone is controlling, directive, and motivated to lead. Those who fall toward the higher end tend to be interested in leadership, control, and influence.	Directing	Likes to be in charge; leads and directs others; keeps a team focused on objectives.
		Persuasive	Enjoys selling and negotiating; finds it easy to persuade others; influences others and wins their support.
		Achieving	Sets self-demanding targets; enjoys difficult challenges; wants to get ahead and succeed.
Assertiveness	Assertiveness is the extent to which someone is outspoken, dominant, and socially confident. Those falling toward the higher end are often bold and decisive but can be confrontational and aggressive.	Directing	Likes to be in charge; leads and directs others; keeps a team focused on objectives.
		Persuasive	Enjoys selling and negotiating; finds it easy to persuade others; influences others and wins their support.
		Socially Confident	Comes across as confident and self-assured; feels at ease during presentations and formal events.
Liveliness	Liveliness measures how outgoing and energetic someone seems. People on higher end tend to be sociable and friendly, though they may be seen as rambunctious and attention seeking.	Directing	Likes to be in charge; leads and directs others; keeps a team focused on objectives.
		Socially Confident	Comes across as confident and self-assured; feels at ease during presentations and formal events.
		Sociable	Is talkative, lively and sociable; enjoys being in groups; entertains others and has a wide network of contacts.
Cooperativeness	Cooperativeness reflects on whether people are cooperative and trusting. People who score higher tend to be team-oriented and accommodating but can sometimes be taken advantage of by others.	Sociable	Is talkative, lively and sociable; enjoys being in groups; entertains others and has a wide network of contacts.
		Agreeable	Is team-oriented and considerate; enjoys working with others; is supportive and pleasant to be with.

2.9.1 The Drive Dimension

Previous research is instrumental in providing a theoretical rationale for one's study and for providing clarity on the potential relationship between variables. Table 5 highlights that the definitions for *drive* (ADEPT-15), *achieving* and *focused on results* (shapes (management)) may have some overlaps in that they explore the extent to which individuals are likely to exert effort towards achieving goals and tasks. From a theoretical perspective, studies have found that motivation is positively correlated with performance (achievement) (Nguyen et al., 2020). In their study motivation was defined as a factor that drives employees to perform certain behaviours such as exerting effort on tasks and goals (Nguyen et al., 2020). Other studies have produced similar findings reporting a positive relationship between motivation and achievement (Irfak, 2022; Kuswati, 2020; Sitopu et al., 2021; Agustina et al., 2021). Based on the findings of previous studies, the following hypotheses are presented:

H1a: The ADEPT-15 *drive* dimension is anticipated to be positively related to the shapes (management) *achieving* dimension.

H1b: The ADEPT-15 *drive* dimension is anticipated to be positively related to the shapes (management) *focused on results* dimension.

2.9.2 The Conceptual Dimension

Table 5 highlights that both the ADEPT-15 and the shapes (management) measure the extent to which individuals are conceptual. In the ADEPT-15, the variable *conceptual* measures the extent to which one is "intellectually curious and imaginative" (Boyce & Capman, 2017, p. 14). Whilst in the shapes (management) the variable *conceptual* measures the extent to which one "enjoys working with concepts, models and strategies; likes intellectual challenges" (Aon, 2019, p. 10). Both definitions converge in describing individuals with a strong inclination to engage with abstract concepts and theoretical frameworks. The characterisation of being "conceptual" as marked by intellectual curiosity and imagination aligns with the notion of enjoying "working with concepts, models, and strategies," indicative of a cognitive orientation towards abstract ideation. Furthermore, the shared emphasis on an inclination towards intellectual challenges suggests a readiness to confront and navigate complex theoretical constructs. Due to the overlaps in the definitions for the variable "*conceptual*" in both personality assessments, the following hypothesis is proposed:

H2: The ADEPT-15 *conceptual* dimension is anticipated to be positively related to the shapes (management) *conceptual* dimension.

2.9.3 The Flexibility Dimension

Flexibility has been a key focus in organisations due to the increasing and rapid changes in the world of work (Bal & Izak, 2021; Bal & Jansen, 2016). Research on flexibility primarily focuses on the benefits of flexibility for the individual and the organisation and the impact flexibility has on performance (Bal & Izak, 2021; Bal & Jansen, 2016; Hornung & Höge, 2019). The literature presents various conceptualisations of flexibility with two main distinctions on whether flexibility is conceptualised physically or psychologically (Bal & Izak, 2021). At the physical level flexibility is often defined as one's ability to easily adjust and bend without breaking (Bal & Izak, 2021; Bal & Jansen, 2016). At the psychological level flexibility is defined as one's openness to change or willingness to accommodate (Bal & Izak, 2021; Bal & Jansen, 2016).

Literature that has taken a person-based or employee perspective on flexibility has measured the degree to which employees possess a broad range of skills and the extent to which they can adapt and adjust to changing work circumstances (Bal & Jansen, 2016; Hornung & Höge, 2019). Jena and Memon (2018) further argue that for employees, flexibility is expected to have a positive impact on their level of engagement with their work and encourages them to engage and exert more effort in their work. In their research they investigated the mediating effect flexibility has on innovation (Jena & Memon, 2018). Based on the literature on flexibility the following hypotheses are proposed:

H3a: The ADEPT-15 *flexibility* dimension is anticipated to be positively related to the shapes (management) *open to change* dimension.

H3b: The ADEPT-15 *flexibility* dimension is anticipated to be positively related to the shapes (management) *imaginative* dimension.

2.9.4 The Ambition Dimension

When considering organisational performance, ambition is thought to be an important contributor to positive workplace outcomes such as career success, achievement, promotability and competition (Hirschi & Spurk, 2021; Jones et al., 2017; Judge & Kammeyer-Mueller, 2012). However, limited empirical studies have explored this relationship (Hirschi & Spurk, 2021). Furthermore, studies investigating this relationship have not investigated accurate measures of ambition (Hirschi & Spurk, 2021; Judge & Kammeyer-Mueller, 2012). In their study, ambition was defined as “the persistent and generalised striving for success, attainment, and accomplishment” (Hirschi & Spurk, 2021, p.1). Their study investigated the relationship

between ambition and performance, measured by supervisor-rated job performance and promotability. They did not find a direct relationship between employees' self-ratings of ambition and supervisors' ratings of employees' task performance. However, they found that supervisors' ratings of employees' levels of ambition were positively related to supervisors' ratings of the employees' task performance ($r = .44, p < .001$) (Hirschi & Spurk, 2021). Based on the literature on ambition the following hypotheses are proposed:

H4a: The ADEPT-15 *ambition* dimension is anticipated to be positively related to the shapes (management) *focused on results* dimension.

H4b: The ADEPT-15 *ambition* dimension is anticipated to be positively related to the shapes (management) *achieving* dimension.

2.9.5 The Power Dimension

Research on the construct of power discusses power and its direct link to leadership where power is popularly defined as “the ability to influence others” (Lunenburg, 2012, p. 1). This definition is in line with the conceptualisation of power in the ADEPT-15 which describes power as being a component of leadership, specifically the extent to which an individual seeks to control and direct others and is motivated to lead (Boyce & Capman, 2017). In a study conducted by Weeks et al., (2017) on the relationship between social media use, opinion leadership and persuasion, the researchers found that attempts to persuade others were positively associated with perceptions of opinion leadership. This finding is in line with other studies that investigated the relationship between power and persuasion (Dubois et al., 2016; Hu et al., 2019).

In a different study that investigated the relationship between power and persuasion among hotel employees and customers, Hu et al., (2019) found that communication shared by high-power hotel employees was perceived to be more persuasive to high-power customers ($M = 4.45, SD = .98$). In their article, they argue that the perceived value of information is not only dependent on the power of the communicator but the power of the recipient of the message. The study found that low-power employees were likely to be perceived as more persuasive by low-power customers as the low-power employees were more likely to use a warm communication style to persuade the customers (Hu et al., 2019). Whereas high-power employees and customers were more likely to be persuaded by facts (Hu et al., 2019). Based on the literature on power the following hypotheses are proposed:

H5a: The ADEPT-15 *power* dimension is anticipated to be positively related to the shapes (management) *directing* dimension.

H5b: The ADEPT-15 *power* dimension is anticipated to be positively related to the shapes (management) *persuasive* dimension.

H5c: The ADEPT-15 *power* dimension is anticipated to be positively related to the shapes (management) *achieving* dimension.

2.9.6 The Assertiveness Dimension

Research on assertiveness has shown that assertiveness plays an important role in influencing employee performance and the effectiveness of their communication (Zhou et al., 2024). The argument supporting this perceived relationship is that assertive individuals are considered effective at expressing themselves and communicating with others, which in turn enhances their performance at work (Zhou et al., 2024). Research has also explored the relationship between assertiveness and leadership where it was found that a curve linear relationship exists between assertiveness and leadership effectiveness (Ames, 2009). More specifically, Ames, (2009) research argues that leaders who are perceived as being either too assertive or not assertive enough are not considered effective leaders. The definition for the dimension *assertiveness* in the ADEPT-15 also highlights that *assertiveness* measures the extent to which an individual is outspoken and socially confident therefore following hypotheses are proposed:

H6a: The ADEPT-15 *assertiveness* dimension is anticipated to be positively related to the shapes (management) *directing* dimension.

H6b: The ADEPT-15 *assertiveness* dimension is anticipated to be positively related to the shapes (management) *persuasive* dimension.

H6c: The ADEPT-15 *assertiveness* dimension is anticipated to be positively related to the shapes (management) *socially confident* dimension.

2.9.7 The Liveliness Dimension

The *liveliness* dimension of the ADEPT-15 measures the extent to which individuals are likely to be outgoing, socially confident and energetic (Boyce & Capman, 2017). According to the ADEPT-15 technical manual, the *liveliness* dimension is theoretically aligned with the extroversion trait on the FFM (Boyce & Capman, 2017). Extroversion as a trait reflects being outgoing, energetic, sociable and assertive (Benoliel & Somech, 2014; Bertsch et al., 2017).

The *liveliness*, *sociable* and *socially confident* dimensions overlap in that they all examine how individuals are likely to behave when interacting with others. These overlaps suggest that the *liveliness* dimension is related to the *sociable* and *socially confident* dimensions of the shapes (management).

Studies on the Big Five personality traits have indicated that extroversion and conscientiousness are among the biggest indicators of leadership effectiveness (Benoliel & Somech, 2014; Bertsch et al., 2017). Bertsch et al., (2017) found that meta-analytic studies have demonstrated a correlation of .39 between the Big Five Personality traits and leadership. Studies on the relationship between extroversion and leadership have mostly reported a positive relationship between the two arguing that those high in extroversion are likely to be more effective leaders (Benoliel & Somech, 2014; Bertsch et al., 2017). Based on the definition overlaps, and findings from previous studies the following hypotheses are proposed:

H7a: The ADEPT-15 *liveliness* dimension is anticipated to be positively related to the shapes (management) *directing* dimension.

H7b: The ADEPT-15 *liveliness* dimension is anticipated to be positively related to the shapes (management) *socially confident* dimension.

H7c: The ADEPT-15 *liveliness* dimension is anticipated to be positively related to the shapes (management) *sociable* dimension.

2.9.8 The Cooperativeness Dimension

Existing literature on teams has found that agreeableness strongly predicts team performance (Bradley et al., 2013; Cogliser et al., 2012; Curşeu et al., 2019). Research has shown that agreeable team members are likely to be more harmonious, better communicators and more cohesive and team orientated. This often leads to increased performance when completing tasks that require collaboration (Bradley et al., 2013; Cogliser et al., 2012; Curşeu et al., 2019). The dimension *cooperativeness* of the ADEPT-15 is also theoretically aligned to the agreeableness trait of the FFM further supporting the expected positive relationship between the cooperativeness and the agreeable dimensions (Boyce & Capman, 2017). In light of the above, the following hypotheses are presented:

H8a: The ADEPT-15 *cooperativeness* dimension is anticipated to be positively related to the shapes (management) *sociable* dimension.

H8b: The ADEPT-15 *cooperativeness* dimension is anticipated to be positively related to the shapes (management) *agreeable* dimension.

Chapter 3

3. METHOD

This chapter outlines the methods used to investigate the hypotheses of this study. It includes the research design, research approach, participants and sampling, measures, procedure, ethical considerations, and statistical analyses.

3.1 Research Design

Research designs provide a structure for collecting, measuring, and analysing data, integrating the different components of the research to ensure that the research questions are effectively addressed. A descriptive research design is used when the goal is to explain phenomena as they exist (Babbie, 2013; Creswell, 2013). This study employs a descriptive cross-sectional research design, as data was collected at a single point in time (Connelly, 2016; Spector, 2019). This approach is useful because it provides a convenient and cost-effective way to gather data and identify correlations, which can be further investigated in follow-up longitudinal studies (Spector, 2019). The aim was to explore the relationship between two personality instruments and the constructs they measure.

3.2 Research Approaches

Research approaches are classified based on how the study is applied, its objectives, and the type of information needed to answer the research questions (Williams, 2007). Three common approaches to conducting research are quantitative, qualitative, and mixed methods. When selecting a research method, the researcher needs to consider the type of data to be collected—whether it will be numerical, textual, or a combination of both. The researcher will then determine how this data will be collected, informed by these considerations.

The quantitative research approach is used to answer questions requiring numerical data to be collected and analysed while the qualitative research approach is used for questions requiring textual data. The mixed methods approach is used when both numerical and textual data are needed. For this research, a quantitative approach will be adopted. The quantitative research approach examines the relationship between variables by testing theories (Babbie, 2013). This approach assumes that social phenomena can be measured and analysed using statistical procedures (Creswell, 2013). It also assumes that the results of a study can be generalised and replicated across different contexts and populations (Babbie, 2013).

3.3 Participants and Sampling

3.3.1 TTS-Top Talent Solutions

TTS-Top Talent Solutions (TTS) is a leading talent management consulting firm that utilises behavioural science to help organisations make better talent decisions and improve talent performance. TTS offers best-of-breed, contextual, flexible, and integrated assessment solutions to countries worldwide.

For this dissertation, the researcher partnered with TTS to provide the necessary assessment data. This partnership was motivated by several reasons. Firstly, TTS partners with top-tier assessment products, being Aon's key partner and the primary distributor of Aon products on the African continent. The ADEPT-15 is one of the flagship personality assessments recommended by both Aon and TTS. Secondly, TTS conducts regular accredited training sessions where practitioners can become certified in administering and interpreting Aon assessments. As part of this training, delegates complete various Aon assessments, including the ADEPT-15 and the shapes (management) questionnaire, which are the two personality questionnaires under investigation in this study. Also, and most importantly, TTS is the researcher's place of employment, ensuring easy access to the data required for this dissertation.

The ADEPT-15 assessment provides both psychological data (in the form of primary dimensions and attributes presented in expert user reports) and competency-based data (in the form of interpreted reports intended for use by line managers and candidates). It has been classified by the Psychometrics Committee of the Professional Board for Psychology as a psychological test (registration number 18/11/268). Regardless of an assessment's classification, TTS requires an HPCSA-registered psychologist or psychometrist to oversee occupational assessments in an organisation, including decisions about test administration and interpretation.

3.3.2 Sample

A sample refers to a subset of a population gathered through observations or surveys (Etikan & Alkassim, 2016). The process of gathering and collecting such a sample is known as sampling (Etikan & Alkassim, 2016). For this study, a sample was drawn from 545 training delegates who attended the cut-e certification training offered by TTS between September 2019 and March 2020. As part of the accreditation program, delegates completed pre-work that included a series of assessments, namely the ADEPT-15 and shapes (management)

questionnaires. The training program was designed for accreditation purposes, with attendees earning Continuing Professional Development (CPD) points. Given their interest in receiving feedback on their results during the course, delegate responses to the questionnaires are expected to reflect an honest and accurate portrayal of their personalities.

The sampling technique employed for this study was non-probability convenience sampling. This approach is suitable when it is impractical to include every subject from the population. Instead, participants are selected based on their accessibility, availability, and willingness to participate in the research (Etikan & Alkassim, 2016; Sharma, 2017).

Of the 545 participants, ages ranged from 20 to 59 years ($M = 27.50$, $SD = 8.35$). Females comprised 79.1% ($n = 430$) and males 21.1% ($n = 115$) of the sample. Among the participants, 139 provided information on their highest qualification, with 29.9% ($n = 163$) indicating a postgraduate degree as their highest qualification. Additional demographic information is provided in Table 6.

Table 6

Demographic Statistics of Training Delegates

		Frequency	Percentage
Racial Background	Black	253	46.50%
	White	243	44.70%
	Coloured	26	4.80%
	Indian	13	2.40%
	Prefer not to respond	7	1.30%
	Asian	3	0.60%
First Language	Afrikaans	188	34.50%
	English	164	30.20%
	Sotho	47	8.60%
	Tswana	45	8.30%
	Zulu	39	7.20%
	Northern Sotho	18	3.30%
	Xhosa	15	2.80%
	Tsonga	10	1.80%
	Venda	5	0.90%
	Ndebele	4	0.70%
	Prefer not to respond	4	0.70%
	Swahili	2	0.40%
	German	1	0.20%
	Norwegian	1	0.20%
	Shona	1	0.20%
Swati	1	0.20%	

Note. $N = 545$.

Demographics characteristics. To comprehensively describe the sample, the following data was extracted from TTS assess: racial background, first language, highest qualification, and gender.

3.4 Measures

3.4.1 Reference Measure: The Adaptive Employee Personality Test (ADEPT-15)

The ADEPT-15 utilises a standardised, internet-delivered mode of administration, designed for online use in an unsupervised but controlled environment. Its design features, including dynamic item pairing and computer adaptive testing, mitigate the risk of socially desirable responses. Candidates typically receive an invitation email with general information about the assessment, its purpose, and specific instructions for accessing and completing it. Upon logging into the TTS assessment platform, candidates are presented with comprehensive instructions to guide them through each stage of the assessment process, along with guidance on accessing support if needed.

The ADEPT-15 employs a pairwise forced-choice response format, where test takers choose between two or more options. They are presented with pairs of statements and must select the one that they believe is most or least representative of them. The statements are matched to reduce the likelihood of faking or responding in socially desirable ways (Boyce & Capman, 2017). The ADEPT-15 is scored automatically via the online assessment platform, with scoring and report generation completed almost instantaneously. Only authorised and verified users have access to candidates' assessment results and reports.

3.4.2 Reference Measure: shapes (Management) Questionnaire

The shapes (management) questionnaire was developed by Aon (2019) to assess work-related personality characteristics associated with success in the workplace. The resulting personality profile aids in decision-making for selection, promotion, or development purposes. Detailed information on the development and validation of the shapes (management) questionnaire can be found in the technical manual provided by Aon (2019). The underlying personality model comprises 18 dimensions relevant to work settings. Typically, participants can complete the shapes (management) questionnaire in approximately 20 minutes.

During the assessment, participants are presented with three statements on each page and are instructed to distribute a total of six points among these statements based on how well each statement represents their likely behaviour. They may allocate all six points to one statement or distribute them across multiple statements as they see fit. Throughout six pages,

participants respond to statements representing the 18 personality dimensions. Each dimension is represented by one statement per round until all dimensions have been covered. In subsequent rounds, statements for each dimension are presented based on responses from the previous round. The shapes (management) questionnaire is scored automatically through the online assessment platform, with scoring and report generation completed almost instantaneously. Access to candidates' assessment results and reports is restricted to authorised and verified users.

3.5 Procedure

As part of the TTS training course, delegates are required to read and electronically sign a privacy policy document before completing the assessments. This privacy policy requests their consent for TTS to administer the assessments, analyse the data, and conduct research using their data (see Appendix A). The data is available for use, and the researcher has been granted permission by TTS to utilise the delegates' data for this research (see Appendix A). Additionally, before conducting data analysis, the researcher obtained ethics approval from the University's Commerce Faculty Ethics Committee (see Appendix A). The data was then shared by TTS's research team in the form of a Microsoft Excel spreadsheet containing all the participants' data.

3.6 Ethical Considerations

As indicated in the subsection above, before conducting the study, the researcher applied for ethical clearance and received permission from TTS to use their data for the study once ethical clearance was provided. This research, aimed at building the evidence base supporting the use of the ADEPT-15 in the South African context, involves no harm to the subjects. Participation was voluntary, and no personal identifying information was linked to individual results. TTS stores data on highly secure servers, with access restricted to highly trained professionals, and all results are reported at an aggregate level to protect participants' identities. TTS complies with the General Data Protection Regulation (GDPR) and the Protection of Personal Information Act (POPIA) regarding data handling

Given the nature of the study and the ages of the participants, the sample was not considered vulnerable. IP addresses were also removed from the database to ensure participants were not identifiable. Lastly, participants provided informed consent for their training data to be used for research purposes.

3.7 Statistical Analyses

The responses to the two questionnaires were prepared and coded for analysis using the Statistical Package for the Social Sciences (SPSS). Both descriptive statistics (such as measures of central tendency and standard deviation), and inferential statistics (including correlation and regression analyses) were employed. By running correlations, this research aims to determine and measure the linear association between the variables of interest, enabling the researcher to assess whether the variables are related. This analysis was carried out in SPSS by importing the data and following a series of predefined steps, allowing the program's algorithm to run Pearson correlation coefficients to ascertain the relationships between variables.

Additionally, stepwise linear regression analyses were conducted to determine the amount of shared variance between the dimensions of the two measures. This was accomplished in SPSS by adding one independent variable at a time to the regression model. At each step, variables were selected based on their contribution to the model's R Square, using a p-value threshold of $p < .05$ to limit the total number of variables included in the final model. The variable with the highest correlation with the outcome (Y) was entered into the model at each step, provided it satisfied the default criterion (i.e., had a p-value of $.05$). The procedure ceased when no remaining variables met the entry criterion (i.e., when all remaining variables had a p-value $> .05$ if included in the model). This approach allowed the researcher to determine the amount of shared variance between the measures of the two questionnaires and, consequently, to ascertain the strength and direction of the relationships between the variables.

Chapter 4

4. Results

This chapter presents the study's findings in a structured manner. It begins with an overview of the correlation matrix. Following this, it discusses the results of regressing the ADEPT-15 dimensions on the shapes (management) dimensions. Finally, it presents the findings from regressing the shapes (management) dimensions on the ADEPT-15 dimensions.

4.1 Descriptive Statistics

This section presents descriptive statistics for the two measures under investigation in this study. Tables 7 and 8 display the range, mean score, standard deviation, and variance for each measure. It is important to note that the scores provided are normed, not raw scores.

Table 7

Descriptive Statistics for the ADEPT-15

Dimensions	Range	Min	Max	M	SD	Variance
Drive	8	1	9	5.74	1.95	3.78
Structure	8	1	9	5.69	2.14	4.58
Conceptual	8	1	9	5.00	2.05	4.22
Flexibility	8	1	9	5.12	2.13	4.51
Mastery	8	1	9	5.26	1.98	3.92
Ambition	8	1	9	6.23	1.98	3.90
Power	8	1	9	5.07	2.03	4.13
Assertiveness	8	1	9	5.11	2.15	4.61
Liveliness	8	1	9	4.91	1.96	3.84
Composure	8	1	9	5.24	2.03	4.12
Positivity	8	1	9	5.66	1.95	3.78
Awareness	8	1	9	5.76	1.95	3.79
Cooperativeness	8	1	9	4.56	1.92	3.70
Sensitivity	8	1	9	6.64	2.03	4.11
Humility	8	1	9	6.64	2.01	4.04

Note. N = 545; min = minimum; max = maximum; M = mean; SD = standard deviations

Table 8*Descriptive Statistics for the shapes (management)*

Dimensions	Range	Min	Max	M	SD	Variance
Directing	9	1	10	4.51	1.88	3.52
Persuasive	9	1	10	4.94	2.27	5.16
Socially Confident	9	1	10	6.00	2.08	4.31
Sociable	9	1	10	6.04	2.07	4.29
Agreeable	9	1	10	4.75	1.74	3.04
Behavioural	9	1	10	7.17	2.00	4.00
Prudent	9	1	10	5.92	1.77	3.12
Focused On Results	9	1	10	4.97	1.73	2.98
Systematic	9	1	10	5.12	2.00	3.99
Analytical	9	1	10	5.26	1.96	3.82
Conceptual	9	1	10	6.13	2.04	4.17
Imaginative	9	1	10	5.23	2.32	5.38
Open To Change	9	1	10	5.72	2.32	5.40
Autonomous	9	1	10	6.38	1.84	3.38
Achieving	9	1	10	4.98	2.04	4.17
Competitive	9	1	10	3.94	1.92	3.70
Energetic	9	1	10	5.56	1.94	3.77
Conscientious	9	1	10	5.18	2.04	4.17

Note. N = 545; Min = minimum; Max = maximum; M = mean; SD = standard deviations

4.2 Correlational Analyses

A correlation signifies the degree to which variables in a dataset are related, determined by a correlation coefficient that indicates the strength and direction of the relationship. The correlation coefficient values range between 1 and -1: values closer to 1 indicate a strong positive relationship, while values closer to -1 indicate a strong negative relationship. A positive correlation exists when increases in one variable (x) correspond to increases in another variable (y), whereas a negative correlation exists when increases in one variable (x) correspond to decreases in another variable (y). A perfect positive relationship is represented by a score of 1, indicating that a one-unit increase in one variable (x) results in a one-unit increase in another variable (y). Conversely, a perfect negative relationship is represented by a score of -1, indicating that a one-unit increase in one variable (x) results in a one-unit decrease in another variable (y). A score of 0 represents a non-linear relationship or no association between variables.

The correlation matrix presented in this study displays the relationships among all variables included in the dataset under investigation. Hypotheses H1 to H8 were formulated to

explore the relationship between the ADEPT-15 dimensions and the dimensions of the shapes (management) questionnaire.

A Pearson product-moment correlation analysis was conducted to investigate the relationships between the dimensions of the ADEPT-15 and the shapes (management) questionnaire. The results, presented in Table 9, generally support the study's hypotheses. The strongest correlation was found between the ADEPT-15 *directive* dimension and the shapes (management) *directing* dimension ($r = .54$, $n = 545$, $p < .01$), indicating a robust positive relationship with a large effect size that was statistically significant. Similarly, a strong correlation was observed between the ADEPT-15 *liveliness* dimension and the shapes (management) *sociable* dimension ($r = .48$, $n = 545$, $p < .01$), also demonstrating a significant positive relationship with a large effect size. These findings underscore substantial correlations between the variables, suggesting practical implications for understanding and leveraging these personality dimensions in organisational contexts.

Several results diverged from the study's hypotheses. Notably, a small effect size was found between the ADEPT-15 *drive* dimension and the shapes (management) *achieving* dimension, though it was statistically significant ($r = .12$, $n = 545$, $p < .05$). Similarly, a small effect size was observed between the ADEPT-15 conceptual dimension and the shapes (management) *conceptual* dimension, also significant ($r = .22$, $n = 545$, $p < .01$). Additionally, a small effect size was noted between the ADEPT-15 *ambitious* dimension and the shapes (management) *focused on results* dimension ($r = .21$, $n = 545$, $p < .01$), as well as between the ADEPT-15 *ambitious* dimension and the shapes (management) *achieving* dimension ($r = .27$, $n = 545$, $p < .01$). Most unexpectedly, the relationship between the ADEPT-15 *assertive* dimension and the shapes (management) *competitive* dimension showed a negative correlation, although not statistically significant ($r = -.02$, $n = 545$, $p > .05$). These findings indicate weak relationships between these variables, despite their statistical significance in most cases. It is important to consider that while statistically significant, the practical significance of such small correlations may be limited depending on the context of application.

There were some correlations identified which were in line with the researcher's expectations however a medium effect size was observed between the variables where it was anticipated to be stronger. For instance, there was a medium effect size between the ADEPT-15 *structure* dimension and the shapes (management) *systematic* dimension which was statistically significant ($r = .42$, $n = 545$, $p < .01$). Additionally, there was a medium effect size observed between the ADEPT-15 *flexible* dimension and the shapes (management) *open to*

change dimension which was statistically significant ($r = .33$, $n = 545$, $p < .01$). The variables were expected to be more closely related since they share the same label name and have closely related definitions. Some of the results in the current study were as expected, while others were unexpected. These findings show moderate relationships between the variables, despite being statistically significant in most cases. It is important to note that while the level of correlation may be meaningful in many research contexts and could have practical implications, it may not be considered strong.

Table 9*Correlations between ADEPT-15 and shapes (management)*

Adept-15 Dimensions	shapes (management) Dimensions								
	Directing	Persuasive	Socially Confident	Sociable	Agreeable	Behavioural	Prudent	Focused on Results	Systematic
Drive	.15**	.06	-.01	-.09*	-.12**	-.07	-.02	.16**	.14**
Structure	.08	-.01	-.06	-.13**	-.12**	-.17**	-.05	.14**	.42**
Conceptual	.09*	.17**	.06	.05	-.20**	-.11**	.06	-.12**	-.28**
Flexibility	.11*	.08	.10*	.07	-.04	-.08	-.02	-.06	-.25**
Mastery	.07	.07	.06	-.12**	-.17**	-.18**	.06	.05	.01
Ambition	.16**	.09*	-.02	-.13**	-.12**	-.16**	-.01	.21**	.07
Power	.54**	.21**	.14**	-.01	-.19**	-.19**	-.01	-.01	-.03
Assertiveness	.39**	.29**	.22**	.12**	-.16**	-.13**	-.10*	-.06	-.19**
Liveliness	.19**	.20**	.38**	.48**	.18**	-.00	-.13**	-.17**	-.19**
Composure	.02	.04	.12**	-.01	-.06	-.06	.06	-.01	-.09*
Positivity	.01	.04	.13**	.17**	.02	-.05	-.01	-.00	-.13**
Open to Feedback	.08	-.01	.13**	-.00	-.13**	-.02	.04	-.04	-.08
Cooperativeness	.11**	.08	.19**	.21**	.29**	-.09*	-.06	.01	-.03
Sensitivity	.03	.08	.10*	.16**	.17**	.25**	.01	-.13**	-.14**
Humility	-.04	-.07	-.03	-.10*	-.02	-.02	.06	.03	.08

** . Correlation is significant at the .01 level (2-tailed).

* . Correlation is significant at the .05 level (2-tailed).

c. Listwise N=545

Adept-15 Dimensions	shapes (management) Dimensions (cont.)								
	Conscientious	Analytical	Conceptual	Imaginative	Open to Change	Autonomous	Achieving	Competitive	Energetic
Drive	.03	.10*	.06	-.05	-.11*	-.04	.11*	-.01	.12**
Structure	.28**	.09*	-.09*	-.17**	-.24**	.02	-.02	.08*	-.04
Conceptual	-.23**	.13**	.22**	.50**	.25**	-.07	.02	-.09*	-.03
Flexibility	-.23**	.02	.11**	.30**	.33**	-.05	.08	-.05	-.03
Mastery	-.09**	.14**	.15**	.10*	.10*	-.11*	.25**	-.05	.10*
Ambition	.02	.04	.12**	-.04	-.06	-.07	.27**	.12**	.12**
Power	-.13**	-.06	.06	.08	-.07	-.00	.07	.10*	.01
Assertiveness	-.24**	-.01	.06	.11*	.07	.15**	-.01	-.02	.01
Liveliness	-.22**	-.18**	-.10*	.05	.06	-.04	-.12**	-.05	-.01
Composure	-.06	.14**	.12**	.09*	.01	-.08*	.06	-.04	.14**
Positivity	-.05	-.04	-.01	.13**	.10*	-.00	.02	-.07	.09*
Open to Feedback	-.09*	.08	.02	.06	-.02	.00	-.02	-.05	.08
Cooperativeness	-.40	-.08	-.11**	-.02	.06	-.20**	-.08	-.01	.01
Sensitivity	-.12**	-.17**	-.07	.09*	-.02	-.02	-.10*	-.08	-.10*
Humility	.91*	.06	.01	-.05	.03	.05	.03	-.10*	.08

** . Correlation is significant at the .01 level (2-tailed).

* . Correlation is significant at the .05 level (2-tailed).

c. Listwise N=545

4.3 Regressing ADEPT-15 dimensions on shapes (management) dimensions

As outlined in Chapter 3, stepwise linear regression analyses were conducted to determine the amount of shared variance between the dimensions of the two measures. This approach allows for the progressive inclusion of variables in a model using forward stepwise regression. In this instance, the best-fitting model, which explained the most variance in the specific personality dimension (*drive*) under investigation, was obtained after five iterations.

4.3.1 Stepwise Regression with Drive as a Dependent Variable

SPSS can automatically remove insignificant variables from the model when a new variable is added, thereby ensuring the model only includes meaningful variables. However, in this instance, none of the added variables were removed, as they were all significant ($p < .05$). No additional variables were introduced into the model once the *systematic* dimension was incorporated. The inclusion of the *systematic* variable resulted in a negligible increase of only .008 points in the adjusted R-squared, as shown in Table 10. Therefore, adding a variable would not result in a significant increase in the coefficient of determination (R-squared). The final R-squared coefficient for the model is .079, indicating that the *focused, results-oriented, directing, energetic, analytical, and systematic* dimensions account for 7.9% of the variance in the *drive* dimension.

Table 10

Stepwise Regression Model 1 Summary (Drive as Dependent Variable)

Model 1 Summary									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
5	.296 ^e	.088	.079	1.866	.010	5.707	1	539	.017

e. Predictors: (Constant), Focused On Results, Directing, Energetic, Analytical, Systematic

Table 11 presents the regression coefficients, indicating that five out of the original 18 variables were included. These five variables are all statistically significant ($p < .05$) and have a positive relationship with the *drive* dimension. Among these, the *directing* dimension exhibited the highest positive correlation with the *drive* dimension. Specifically, for each unit increase in the *directing* dimension, there was a corresponding increase of .182 units in the *drive* dimension.

Table 11

Model 1 Stepwise Regression Coefficients (Drive as Dependent Variable)

Model		Coefficients ^a			t	Sig.
		Unstandardised Coefficients		Standardised Coefficients		
		B	Std. Error	Beta		
5	(Constant)	2.379	.482		4.931	<.001
	Focused On Results	.149	.049	.132	3.062	.002
	Directing	.189	.043	.182	4.375	<.001
	Energetic	.128	.042	.128	3.080	.002
	Analytical	.105	.042	.105	2.508	.012
	Systematic	.100	.042	.103	2.389	.017

a. Dependent Variable: Drive

4.3.2 Stepwise Regression with Structure as a Dependent Variable

Table 12 shows that the best-fitting model, which explained the most variance in the specific personality dimension (*structure*), was obtained after four iterations. In each iteration, no variables were removed, as all four variables added to Model 2 were significant ($p < .05$). After including the *directing* dimension in Model 2, no additional variables were added. The inclusion of the *directing* variable resulted in a minimal increase of .007 points in the adjusted R-squared value, as indicated in Table 12. Therefore, adding further variables would not result in a significant increase in the coefficient of determination (R-squared). Model 2's final R-squared coefficient is .22, indicating that the *systematic*, *open to change*, *behavioural*, and *directing* dimensions together explain 22% of the variation in the *structure* dimension.

Table 12

Stepwise Regression Model 2 Summary (Structure as Dependent Variable)

Model 2 Summary									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
4	.469 _d	.220	.214	1.897	.007	4.999	1	540	.026

d. Predictors: (Constant), Systematic, Open To Change, Behavioural, Directing

Based on Table 13, it is evident that among the four dimensions, the *systematic* dimension demonstrates the strongest positive correlation with the *structure* dimension. Specifically, a single unit increase in the *systematic* dimension results in a .371 unit increase in the *structure* dimension.

Table 13*Model 2 Stepwise Regression Coefficients (Structure as Dependent Variable)*

Model		Coefficients ^a			t	Sig.
		Unstandardised Coefficients		Standardised Coefficients		
		B	Std. Error	Beta		
4	(Constant)	4.901	.577		8.497	<.001
	Systematic	.398	.043	.371	9.240	<.001
	Open To Change	-.143	.037	-.155	-3.899	<.001
	Behavioural	-.122	.042	-.114	-2.916	.004
	Directing	.098	.044	.086	2.236	.026

a. Dependent Variable: Structure

4.3.3 Stepwise Regression with Conceptual as a Dependent Variable

Table 14 shows that the best-fitting model, which explained the most variance in the specific personality dimension (*conceptual*), was obtained after five iterations. In each iteration, no variables were removed, as all four variables added to Model 3 were significant ($p < .05$). The inclusion of the *autonomous* variable in Model 3 resulted in a modest .007-point increase in the adjusted R-squared value, as indicated in Table 14. No additional variables were added beyond this point, as doing so would not lead to a significant increase in the coefficient of determination (R-squared). Model 3's R-squared coefficient of .32 indicates that the combined impact of the *imaginative*, *systematic*, *agreeable*, *behavioural*, and *autonomous* dimensions accounts for an impressive 32% of the variance observed in the *conceptual* dimension.

Table 14*Stepwise Regression Model 3 Summary (Conceptual as Dependent Variable)*

Model 3 Summary									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
5	.562 ^e	.316	.309	1.707	.007	5.477	1	539	.020

e. Predictors: (Constant), Imaginative, Systematic, Agreeable, Behavioural, Autonomous

As shown in Table 15, the *imaginative* dimension revealed the strongest positive correlation with the *conceptual* dimension among all five dimensions. Specifically, increasing the *imaginative* dimension by one unit is associated with a .413 unit increase in the *conceptual* dimension.

Table 15*Model 3 Stepwise Regression Coefficients (Conceptual as Dependent Variable)*

Model		Coefficients ^a			t	Sig.
		Unstandardised Coefficients		Standardised Coefficients		
		B	Std. Error	Beta		
5	(Constant)	6.548	.575		11.395	<.001
	Imaginative	.366	.033	.413	11.037	<.001
	Systematic	-.221	.039	-.215	-5.679	<.001
	Agreeable	-.197	.043	-.168	-4.569	<.001
	Behavioural	-.110	.037	-.107	-2.939	.003
	Autonomous	-.095	.040	-.085	-2.340	.020

a. Dependent Variable: Conceptual

4.3.4 Stepwise Regression with Flexibility as a Dependent Variable

After four iterations, Table 16 reveals the most effective model, which accounted for the highest amount of variation in the *flexibility* dimension. In each iteration, no variables were removed, as all four variables added to Model 4 were significant ($p < .05$). No new variables were added after the *directing* dimension was included in Model 4, as the inclusion of the *directing* variable only resulted in a .011-point increase in the adjusted R-squared, as shown in Table 16. Therefore, adding further variables would not result in a significant increase in the coefficient of determination (R-squared). The final R-squared coefficient for Model 4 is .18, indicating that the *open to change*, *imaginative*, *systematic*, and *directing* dimensions account for 18% of the variance in the *flexibility* dimension.

Table 16*Stepwise Regression Model 4 Summary (Flexibility as Dependent Variable)*

Model 4 Summary									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
4	.426 ^d	.181	.175	1.929	.011	7.542	1	540	.006

d. Predictors: (Constant), Open To Change, Imaginative, Systematic, Directing

Table 17 data highlights a strong positive correlation between the *open to change* dimension and the *flexibility* dimension. Specifically, each unit increase in the *open to change* dimension corresponds to a 0.244 unit increase in the *flexibility* dimension.

Table 17*Model 4 Stepwise Regression Coefficients (Flexibility as Dependent Variable)*

Model		Coefficients ^a			t	Sig.
		Unstandardised Coefficients		Standardised Coefficients		
		B	Std. Error	Beta		
4	(Constant)	3.183	.457		6.964	<.001
	Open To Change	.223	.038	.244	5.829	<.001
	Imaginative	.167	.038	.182	4.374	<.001
	Systematic	-.150	.044	-.141	-3.434	<.001
	Directing	.122	.044	.108	2.746	.006

a. Dependent Variable: Flexibility

4.3.5 Stepwise Regression with Mastery as a Dependent Variable

After six iterations, Table 18 presents the model that achieved the highest accuracy in explaining the majority of variations in the *mastery* dimension. All variables included in this model were found to be statistically significant ($p < .05$). Notably, no additional variables were introduced following the inclusion of the *conceptual* dimension in model 5, as its addition only marginally increased the adjusted R-squared by 0.01, as indicated in Table 18. The final R-squared coefficient for model 5 is 0.13, indicating that the *achieving*, *behavioural*, *agreeable*, *autonomous*, *socially confident*, and *conceptual* dimensions collectively account for 13% of the variance observed in the *mastery* dimension.

Table 18*Stepwise Regression Model 5 Summary (Mastery as Dependent Variable)*

Model 5 Summary									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
6	.356 ^f	.127	.117	1.859	.010	5.899	1	538	.015

f. Predictors: (Constant), Achieving, Behavioural, Agreeable, Autonomous, Socially Confident, Conceptual

According to Table 19, the *achieving* dimension demonstrates the strongest positive correlation with the *mastery* dimension. Specifically, for each unit increase in the *achieving* dimension, there is a corresponding increase of 0.21 units in the *mastery* dimension.

Table 19

Model 5 Stepwise Regression Coefficients (Mastery as Dependent Variable)

Model		Coefficients ^a			t	Sig.
		Unstandardised Coefficients		Standardised Coefficients		
		B	Std. Error	Beta		
6	(Constant)	5.331	.658		8.102	<.001
	Achieving	.206	.040	.212	5.144	<.001
	Behavioural	-.126	.041	-.128	-3.115	.002
	Agreeable	-.138	.048	-.122	-2.914	.004
	Autonomous	-.114	.044	-.106	-2.594	.010
	Socially Confident	.099	.039	.103	2.537	.011
	Conceptual	.098	.040	.101	2.429	.015

a. Dependent Variable: Mastery

4.3.6 Stepwise Regression with Ambition as a Dependent Variable

After six iterations, Table 20 presents the model that explains the highest amount of variation in the *ambition* dimension. All variables included in the model were found to be statistically significant ($p < .05$). In model 5, the energetic variable was introduced to assess its impact; however, no significant increase in the adjusted R-squared value was observed, as shown in Table 20. Consequently, no additional variables were added to the model. The final R-squared coefficient for model 6 is 0.16, indicating that the *achieving, focused on results, directing, conceptual, competitive, and energetic* dimensions collectively account for 16% of the variance observed in the *ambition* dimension.

Table 20

Stepwise Regression Model 6 Summary (Ambition as Dependent Variable)

Model 6 Summary									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
6	.394 ^f	.155	.146	1.825	.009	5.517	1	538	.019

f. Predictors: (Constant), Achieving, Focused On Results, Directing, Conceptual, Competitive, Energetic

Table 21 indicates that the *achieving* dimension exhibits the most significant positive correlation with the *ambition* dimension. Specifically, each unit increase in the *achieving* dimension corresponds to a 0.192 unit increase in the *ambition* dimension.

Table 21*Model 6 Stepwise Regression Coefficients (Ambition as Dependent Variable)*

Model		Coefficients ^a			t	Sig.
		Unstandardised Coefficients		Standardised Coefficients		
		B	Std. Error	Beta		
6	(Constant)	1.862	.491		3.789	<.001
	Achieving	.186	.040	.192	4.632	<.001
	Focused On Results	.218	.046	.191	4.697	<.001
	Directing	.171	.042	.162	4.054	<.001
	Conceptual	.102	.039	.105	2.634	.009
	Competitive	.109	.042	.106	2.613	.009
	Energetic	.097	.041	.095	2.349	.019

a. Dependent Variable: Ambition

4.3.7 Stepwise Regression with Power as a Dependent Variable

After four iterations, Table 22 presents the model that effectively explains the highest variance in the specific personality dimension (*power*) under investigation. All variables included in the model were found to be statistically significant ($p < .05$). Following the inclusion of the *persuasive* dimension in model 7, no further variables were added. Table 22 shows that the addition of the *persuasive* variable resulted in a marginal increase of only 0.005 points in the adjusted R-squared. The final R-squared coefficient for model 7 is 0.32, indicating that the *directing*, *behavioural*, *agreeable*, and *persuasive* dimensions collectively account for 32% of the variance observed in the *power* dimension.

Table 22*Stepwise Regression Model 7 Summary (Power as Dependent Variable)*

Model 7 Summary									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
4	.569 ^d	.324	.319	1.677	.005	3.924	1	540	.048

d. Predictors: (Constant), Directing, Behavioural, Agreeable, Persuasive

Table 23 shows that among the four dimensions, the *directing* dimension exhibited the strongest correlation with the *power* dimension. Specifically, a one-unit increase in the *directing* dimension corresponded to a 0.493 unit increase in the *power* dimension.

Table 23*Model 7 Stepwise Regression Coefficients (Power as Dependent Variable)*

Model		Coefficients ^a			t	Sig.
		Unstandardised Coefficients		Standardised Coefficients		
		B	Std. Error	Beta		
4	(Constant)	3.795	.414		9.165	<.001
	Directing	.534	.040	.493	13.323	<.001
	Behavioural	-.124	.036	-.122	-3.424	<.001
	Agreeable	-.119	.042	-.102	-2.835	.005
	Persuasive	.065	.033	.072	1.981	.048

a. Dependent Variable: Power

4.3.8 Stepwise Regression with Assertiveness as a Dependent Variable

The optimal model for the *assertiveness* dimension was identified after nine iterations, as detailed in Table 24. All variables included in the model were found to be statistically significant ($p < .05$). Following the inclusion of the *prudent* dimension in model 8, no additional variables were introduced. The addition of the *prudent* variable led to a marginal increase of 0.008 points in the adjusted R-squared, as depicted in Table 24. Model 8 achieved a final R-squared coefficient of 0.28, indicating that the dimensions of *directing*, *persuasive*, *systematic*, *autonomous*, *behavioural*, *socially confident*, *agreeable*, *competitive*, and *prudent* collectively account for 28% of the variance observed in the *assertiveness* dimension.

Table 24*Stepwise Regression Model 8 Summary (Assertiveness as Dependent Variable)*

Model 8 Summary									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
9	.524 ⁱ	.275	.263	1.844	.008	5.923	1	535	.015

i. Predictors: (Constant), Directing, Persuasive, Systematic, Autonomous, Behavioural, Socially Confident, Agreeable, Competitive, Prudent

According to Table 25, the *directing* dimension exhibited the strongest positive correlation with the *assertiveness* dimension. Specifically, for each unit increase in the *directing* dimension, there was a notable 0.276 unit increase in the *assertiveness* dimension.

Table 25*Model 8 Stepwise Regression Coefficients (Assertiveness as Dependent Variable)*

Model		Coefficients ^a			t	Sig.
		Unstandardised Coefficients		Standardised Coefficients		
		B	Std. Error	Beta		
9	(Constant)	4.694	.759		6.186	<.001
	Directing	.316	.045	.276	6.950	<.001
	Persuasive	.172	.037	.182	4.698	<.001
	Systematic	-.159	.042	-.147	-3.818	<.001
	Autonomous	.144	.044	.123	3.303	.001
	Behavioural	-.118	.041	-.110	-2.891	.004
	Socially Confident	.109	.040	.105	2.702	.007
	Agreeable	-.144	.047	-.117	-3.050	.002
	Competitive	-.104	.042	-.093	-2.452	.015
	Prudent	-.114	.047	-.093	-2.434	.015

a. Dependent Variable: Assertiveness

4.3.9 Stepwise Regression with Liveliness as a Dependent Variable

Table 26 shows that the model explaining the highest variance in the specific personality dimension (*liveliness*) was achieved after six iterations. All variables included in the model were found to be statistically significant ($p < .05$). Following the inclusion of the *agreeable* dimension in model 9, no further variables were added, as its inclusion resulted in only a marginal 0.008-point increase in the adjusted R-squared, as depicted in Table 26. The final R-squared coefficient for model 9 is 0.31, indicating that the *sociable*, *socially confident*, *directing*, *competitive*, *persuasive*, and *agreeable* dimensions collectively account for 31% of the variance observed in the *liveliness* dimension.

Table 26*Stepwise Regression Model 9 Summary (Liveliness as Dependent Variable)*

Model 9 Summary									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
6	.559 ^f	.312	.305	1.633	.008	6.298	1	538	.012

f. Predictors: (Constant), Sociable, Socially Confident, Directing, Competitive, Persuasive, Agreeable

According to Table 27, the *sociable* dimension exhibited the strongest positive relationship with the *liveliness* dimension among the six dimensions. Specifically, a one-unit increase in the *sociable* dimension was associated with a 0.36 unit increase in the *liveliness* dimension.

Table 27*Model 9 Stepwise Regression Coefficients (Liveliness as Dependent Variable)*

Model		Coefficients ^a			t	Sig.
		Unstandardised Coefficients		Standardised Coefficients		
		B	Std. Error	Beta		
6	(Constant)	.684	.366		1.866	.063
	Sociable	.343	.039	.363	8.841	<.001
	Socially Confident	.184	.038	.195	4.895	<.001
	Directing	.115	.040	.110	2.874	.004
	Competitive	-.103	.037	-.101	-2.789	.005
	Persuasive	.087	.032	.100	2.667	.008
	Agreeable	.107	.043	.095	2.510	.012

a. Dependent Variable: Liveliness

4.3.10 Stepwise Regression with Composure as a Dependent Variable

Table 28 shows that the model explaining the highest variance in the specific personality dimension (*composure*) was achieved after four iterations. All variables included in the model were found to be statistically significant ($p < .05$). Following the inclusion of the *conceptual* dimension in model 10, no further variables were added, as its inclusion resulted in only a marginal 0.01-point increase in the adjusted R-squared, as depicted in Table 28. The final R-squared coefficient for model 10 is 0.07, indicating that the *energetic*, *analytical*, *socially confident*, and *conceptual* dimensions collectively account for 7% of the variance observed in the *composure* dimension.

Table 28*Stepwise Regression Model 10 Summary (Composure as Dependent Variable)*

Model 10 Summary									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
4	.265 ^d	.070	.064	1.965	.010	5.675	1	540	.018

d. Predictors: (Constant), Energetic, Analytical, Socially Confident, Conceptual

According to Table 29, the *energetic* dimension exhibited the strongest positive relationship with the *composure* dimension among the four dimensions. Specifically, a one-unit increase in the *energetic* dimension was associated with a 0.15 unit increase in the *composure* dimension.

Table 29

Model 10 Stepwise Regression Coefficients (Composure as Dependent Variable)

Model		Coefficients ^a			t	Sig.
		Unstandardised Coefficients		Standardised Coefficients		
		B	Std. Error	Beta		
4	(Constant)	2.137	.495		4.318	<.001
	Energetic	.157	.044	.150	3.605	<.001
	Analytical	.144	.045	.138	3.207	.001
	Socially Confident	.141	.041	.145	3.453	<.001
	Conceptual	.102	.043	.102	2.382	.018

a. Dependent Variable: Composure

4.3.11 Stepwise Regression with Positivity as a Dependent Variable

Table 30 shows that the model explaining the highest variance in the specific personality dimension (*positivity*) was achieved after three iterations. All variables included in the model were found to be statistically significant ($p < .05$). Following the inclusion of the *energetic* dimension in model 11, no further variables were added, as its inclusion resulted in only a marginal 0.02-point increase in the adjusted R-squared, as depicted in Table 30. The final R-squared coefficient for model 11 is 0.06, indicating that the *sociable*, *imaginative*, and *energetic* dimensions collectively account for 6% of the variance observed in the *positivity* dimension.

Table 30

Stepwise Regression Model 11 Summary (Positivity as Dependent Variable)

Model 11 Summary									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
3	.245 ^c	.060	.055	1.890	.017	9.634	1	541	.002

c. Predictors: (Constant), Sociable, Imaginative, Energetic

According to Table 31, the *sociable* dimension exhibited the strongest positive relationship with the *positivity* dimension among the three dimensions. Specifically, a one-unit increase in the *sociable* dimension was associated with a 0.18 unit increase in the *positivity* dimension.

Table 31

Model 11 Stepwise Regression Coefficients (Positivity as Dependent Variable)

Model		Coefficients ^a				t	Sig.
		Unstandardised Coefficients		Standardised Coefficients	Beta		
		B	Std. Error				
3	(Constant)	3.305	.417			7.924	<.001
	Sociable	.165	.039	.176		4.202	<.001
	Imaginative	.119	.035	.141		3.345	<.001
	Energetic	.132	.042	.132		3.104	.002

a. Dependent Variable: Positivity

4.3.12 Stepwise Regression with Awareness as a Dependent Variable

Table 32 shows that the model explaining the highest variance in the specific personality dimension (*awareness*) was achieved after two iterations. All variables included in the model were found to be statistically significant ($p < .05$). Following the inclusion of the *socially confident* dimension in model 12, no further variables were added, as its inclusion resulted in only a marginal 0.02-point increase in the adjusted R-squared, as depicted in Table 32. The final R-squared coefficient for model 12 is 0.04, indicating that the *agreeable* and *socially confident* dimensions collectively account for 4% of the variance observed in the *awareness* dimension.

Table 32

Stepwise Regression Model 12 Summary (Awareness as Dependent Variable)

Model 12 Summary									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
2	.187 ^b	.035	.031	1.915	.017	9.741	1	542	.002

b. Predictors: (Constant), Agreeable, Socially Confident

According to Table 33, the *agreeable* dimension exhibited the strongest negative relationship with the *awareness* dimension among the two dimensions. Specifically, a one-unit increase in the *agreeable* dimension was associated with a 0.18 unit decrease in the *awareness* dimension, which was not anticipated.

Table 33

Model 12 Stepwise Regression Coefficients (Awareness as Dependent Variable)

Model		Coefficients ^a			t	Sig.
		Unstandardised Coefficients		Standardised Coefficients		
		B	Std. Error	Beta		
2	(Constant)	5.741	.331		17.336	<.001
	Agreeable	-.153	.047	-.137	-3.243	.001
	Socially Confident	.124	.040	.132	3.121	.002

a. Dependent Variable: Awareness

4.3.13 Stepwise Regression with Cooperativeness as a Dependent Variable

Table 34 shows that the model explaining the highest variance in the specific personality dimension (*cooperativeness*) was achieved after five iterations. All variables included in the model were found to be statistically significant ($p < .05$). Following the inclusion of the *behavioural* dimension in model 13, no further variables were added, as its inclusion resulted in only a marginal 0.01-point increase in the adjusted R-squared, as depicted in Table 34. The final R-squared coefficient for model 13 is 0.17, indicating that the *agreeable*, *socially confident*, *autonomous*, *directing*, and *behavioural* dimensions collectively account for 17% of the variance observed in the *cooperativeness* dimension.

Table 34

Stepwise Regression Model 13 Summary (Cooperativeness as Dependent Variable)

Model 13 Summary									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
5	.416 ^e	.173	.165	1.758	.010	6.367	1	539	.012

e. Predictors: (Constant), Agreeable, Socially Confident, Autonomous, Directing, Behavioural

According to Table 35, the *agreeable* dimension exhibited the strongest positive relationship with the *cooperativeness* dimension among the five dimensions. Specifically, a one-unit increase in the *agreeable* dimension was associated with a 0.3 unit increase in the *cooperativeness* dimension.

Table 35*Model 13 Stepwise Regression Coefficients (Cooperativeness as Dependent Variable)*

Model		Coefficients ^a			t	Sig.
		Unstandardised Coefficients		Standardised Coefficients		
		B	Std. Error	Beta		
5	(Constant)	3.356	.505		6.644	<.001
	Agreeable	.327	.044	.296	7.375	<.001
	Socially Confident	.153	.038	.165	4.067	<.001
	Autonomous	-.172	.041	-.164	-4.147	<.001
	Directing	.116	.042	.113	2.732	.006
	Behavioural	-.097	.038	-.100	-2.523	.012

a. Dependent Variable: Cooperativeness

4.3.14 Stepwise Regression with Sensitivity as a Dependent Variable

Table 36 shows that the model explaining the highest variance in the specific personality dimension (*sensitivity*) was achieved after four iterations. All variables included in the model were found to be statistically significant ($p < .05$). Following the inclusion of the *agreeable* dimension in model 14, no further variables were added, as its inclusion resulted in only a marginal 0.02-point increase in the adjusted R-squared, as depicted in Table 36. The final R-squared coefficient for model 14 is 0.11, indicating that *the behavioural, analytical, imaginative, and agreeable* dimensions collectively account for 11% of the variance observed in the *sensitivity* dimension.

Table 36*Stepwise Regression Model 14 Summary (Sensitivity as Dependent Variable)*

Model 14 Summary									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
4	.338 ^d	.114	.108	1.915	.015	8.967	1	540	.003

d. Predictors: (Constant), Behavioural, Analytical, Imaginative, Agreeable

According to Table 37, the *behavioural* dimension exhibited the strongest positive relationship with the *sensitivity* dimension among the four dimensions. Specifically, a one-unit increase in the *behavioural* dimension was associated with a 0.23 unit increase in the *sensitivity* dimension.

Table 37*Model 14 Stepwise Regression Coefficients (Sensitivity as Dependent Variable)*

Model		Coefficients ^a			t	Sig.
		Unstandardised Coefficients		Standardised Coefficients		
		B	Std. Error	Beta		
4	(Constant)	4.360	.510		8.543	<.001
	Behavioural	.237	.041	.234	5.749	<.001
	Analytical	-.140	.044	-.135	-3.178	.002
	Imaginative	.117	.036	.134	3.251	.001
	Agreeable	.148	.049	.127	2.994	.003

a. Dependent Variable: Sensitivity

4.3.15 Stepwise Regression with Humility as a Dependent Variable

Table 38 shows that the model explaining the highest variance in the specific personality dimension (*humility*) was achieved after two iterations. All variables included in the model were found to be statistically significant ($p < .05$). Following the inclusion of the *sociable* dimension in model 15, no further variables were added, as its inclusion resulted in only a marginal 0.01-point increase in the adjusted R-squared, as depicted in Table 38. The final R-squared coefficient for model 15 is 0.02, indicating that the *competitive* and *sociable* dimensions collectively account for 2% of the variance observed in the *humility* dimension.

Table 38*Stepwise Regression Model 15 Summary (Humility as Dependent Variable)*

Model 15 Summary									
Mode	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1									
2	.136 ^b	.019	.015	1.995	.008	4.419	1	542	.036

b. Predictors: (Constant), Competitive, Sociable

According to Table 39, the *competitive* dimension exhibited the strongest negative relationship with the *humility* dimension among the two dimensions. Specifically, a one-unit increase in the *competitive* dimension was associated with a -0.95 unit decrease in the *humility* dimension.

Table 39*Model 15 Stepwise Regression Coefficients (Humility as Dependent Variable)*

Model		Coefficients ^a			t	Sig.
		Unstandardised Coefficients		Standardised Coefficients		
		B	Std. Error	Beta		
2	(Constant)	7.555	.306		24.690	<.001
	Competitive	-.099	.045	-.095	-2.226	.026
	Sociable	-.087	.041	-.090	-2.102	.036

a. Dependent Variable: Humility

4.4 Summary of Results

The average variance explained across the ADEPT-15 dimensions by the subsets of the shapes (management) dimensions is 17.13%, ranging from a low of 4% for the ADEPT-15 awareness dimension to a high of 32% for the ADEPT-15 *conceptual* and *directive* dimensions. Overall, the study results align with expectations, as the majority of anticipated relationships were observed.

Chapter 5

5. Discussion

Psychometric assessments in organisations play a pivotal role in ensuring that organisations can select, train, and develop talented employees (Kabalina & Osipova, 2022; Kgosana, 2012; Mwila et al., 2018). The rigorous development of international psychometric assessments and the high cost of developing local instruments have led organisations to rely on international test publishers. However, concerns about the use of international tests primarily focus on issues of reliability, validity, and potential discrimination.

This research aimed to examine the ADEPT-15, a personality assessment developed by a global test provider, and its application in South Africa. Specifically, the study investigated whether the ADEPT-15 questionnaire retains its validity when administered in South Africa. This objective was achieved by analysing the relationship between the ADEPT-15 and the shapes (management) questionnaire, an instrument widely used within the South African work context.

This chapter will discuss the main findings of the study in relation to existing literature. Following that, a discussion on the limitations of the study will be presented, along with recommendations for future research.

5.1 Discussion of Results

5.1.1 Discussion of the Hypotheses Related to the Drive Dimension

The first set of hypotheses investigated the relationship between the ADEPT-15 *drive* dimension and the shapes (management) dimensions of *achieving* and *focused on results*. Specifically, H1a posited that the ADEPT-15 drive dimension would be positively related to the shapes (management) achieving dimension, while H1b anticipated a positive relationship between the ADEPT-15 drive dimension and the shapes (management) focused on results dimension. Results presented in Tables 10 and 11 indicate that five dimensions of the shapes (management) questionnaire were positively associated with the *drive* dimension of the ADEPT-15, with R Square = .09 and F = 5.70. This suggests that out of the 18 dimensions on the shapes (management) questionnaire, only the dimensions *focused on results*, *directing*, *energetic*, *analytical*, and *systematic* were positively linked to the *drive dimension* of the ADEPT-15.

Based on these results, H1a is rejected as the *achieving* dimension was not included in the regression model. This result was unexpected given that the definitions for the two dimensions seem to overlap, both measuring the extent to which an individual is likely to focus on task accomplishments and goal attainment. However, H1b is supported, as the positive relationship between the *drive* dimension and the *focused on results* dimension aligns with existing literature on motivation and achievement, which suggests that motivation influences workplace performance and achievement (Irfak, 2022; Nguyen et al., 2020; Sitopu et al., 2021; Agustina et al., 2021). These studies defined motivation as a personal characteristic that drives individuals to exert effort on tasks and goals (Irfak, 2022; Nguyen et al., 2020). These findings align with the current study, which found a positive relationship between the *drive dimension* and the *focused on results* dimension.

5.1.2 Discussion of the Hypothesis Related to the Conceptual Dimension

The study's second hypothesis was that the ADEPT-15 *conceptual* dimension would be positively related to the shapes (management) *conceptual* dimension. A correlation analysis confirmed the anticipated positive relationship between the *conceptual* dimensions of both personality measures, as hypothesised (see Table 5). This finding aligns with the overlapping definitions of the constructs. However, the strength of this relationship was unexpectedly weak ($r = .22$, $p = .01$).

Regarding the shared variance between the two personality measures, regression analysis revealed that the dimensions most predictive of variance in the *conceptual* dimension (ADEPT-15) emerged after five iterations. These dimensions—*imaginative*, *systematic*, *agreeable*, *behavioural*, and *autonomous*—collectively accounted for 32% of the observed variance in the *conceptual* dimension.

5.1.3 Discussion of the Hypotheses Related to the Flexibility Dimension

In examining the relationship between the ADEPT-15 flexibility dimension and the dimensions of the Shapes (management) framework, two hypotheses were tested. Hypothesis H3a posited that the ADEPT-15 *flexibility* dimension would be positively related to the Shapes (management) *open to change* dimension. Hypothesis H3b suggested a positive relationship between the ADEPT-15 *flexibility* dimension and the *imaginative* dimension of Shapes (management).

The SPSS output revealed positive correlations between the *flexibility* dimension and both *open to change* ($r = .33$, $p = .01$) and *imaginative* ($r = .30$, $p = .01$) dimensions. Despite

the modest strength of these relationships, the results provide support for hypotheses H3a and H3b. These findings are consistent with existing literature on flexibility, which suggests that individuals who exhibit flexibility tend to be open to change (Bal & Izak, 2021; Bal & Jansen, 2016).

Furthermore, regression analysis indicated that among the 18 dimensions of the shapes (management), dimensions such as *open to change*, *imaginative*, *systematic*, and *directing* collectively explained 18% of the variance in *flexibility*. Notably, the *open to change* dimension demonstrated the strongest positive correlation with the *flexibility* dimension of ADEPT-15.

5.1.4 Discussion of the Hypotheses Related to the Ambition Dimension

The relationship between the ADEPT-15 *ambition* dimension and the dimensions of Shapes (management) was examined through two hypotheses: Hypothesis H4a anticipated a positive relationship between the *ambition* dimension and the *focused on results* dimension, while Hypothesis H4b anticipated a positive relationship between the *ambition* dimension and the *achieving* dimension.

The correlation analysis presented in Table 9 indicates a positive relationship between the *ambition* dimension and both *focused on results* ($r = .21, p = .01$) and *achieving* dimensions ($r = .27, p = .01$). While these correlations reveal a weak positive relationship, they provide support for hypotheses H4a and H4b. These findings are consistent with existing literature which posits that ambition plays a crucial role in enhancing workplace outcomes such as career success, achievement, promotability, and competitive performance (Hirschi & Spurk, 2021; Jones et al., 2017; Judge & Kammeyer-Mueller, 2012).

For instance, Hirschi and Spurk, (2021) found a significant positive relationship ($r = .44, p < .001$) between supervisor ratings of employee ambition and performance ratings. Furthermore, the regression analysis revealed that among the 18 dimensions of the shapes (management), dimensions including *achieving*, *focused on results*, *directing*, *conceptual*, *competitive*, and *energetic* collectively explained 16% of the variance in the *ambition* dimension. Notably, the *achieving* dimension exhibited the strongest positive correlation with the *ambition* dimension.

5.1.5 Discussion of the Hypotheses Related to the Power Dimension

The relationship between the ADEPT-15 *power* dimension and various dimensions of the Shapes (management) framework was analysed through several hypotheses. Hypothesis H5a anticipated a positive relationship between the ADEPT-15 *power* dimension and the

directing dimension of Shapes (management). Hypothesis H5b anticipated a positive relationship between the *power* dimension and the *persuasive* dimension, while Hypothesis H5c anticipated a positive relationship between the *power* dimension and the *achieving* dimension. Table 9 illustrates a significant positive relationship between the ADEPT-15 *power* dimension and the *directing* ($r = .54, p = .01$) and *persuasive* ($r = .21, p = .01$) dimensions of the shapes (management). These results support Hypotheses H5a and H5b, which are therefore not rejected. However, the absence of a reported significant correlation with the "achieving" dimension suggests that Hypothesis H5c might not be supported.

These findings align with expectations, as the literature posits that power is closely linked to leadership, reflecting an individual's motivation to lead, control situations, and influence others (Boyce & Capman, 2017). The conceptual overlap between *power* and *directing* further supports this association. Weeks et al. (2017) similarly found that attempts to persuade others are positively associated with perceptions of opinion leadership. This suggests that individuals who view themselves as opinion leaders are more effective at persuading and influencing others' opinions. Furthermore, Hu et al. (2019) observed that the relationship between power and persuasion can be influenced by the power dynamics between employees and customers. This has practical implications, as it suggests that employees with higher power can be more successful in persuading high-power customers,

The regression analysis among the 18 dimensions of the shapes (management) revealed that dimensions such as *directing*, *behavioural*, *agreeable*, and *persuasive* collectively explained 32% of the variance in the *power* dimension. Notably, the *directing* dimension exhibited the strongest positive correlation with the *power* dimension, emphasising its role in leadership and influence.

5.1.6 Discussion of the Hypotheses Related to the Assertiveness Dimension

The relationship between the ADEPT-15 *assertiveness* dimension and various Shapes (management) dimensions was explored through several hypotheses. Hypothesis H6a anticipated a positive relationship between the ADEPT-15 *assertiveness* dimension and the *directing* dimension of Shapes (management). Hypothesis H6b proposed a positive relationship between *assertiveness* and the *persuasive* dimension, while Hypothesis H6c suggested a positive relationship between *assertiveness* and the *socially confident* dimension.

A positive correlation was observed between the *assertiveness* dimension and the *directing* ($r = .39, p = .01$), *persuasive* ($r = .29, p = .01$), and *socially confident* ($r = .22, p =$

.01) dimensions. As these relationships were statistically significant, Hypotheses H6a, H6b, and H6c are not rejected. These findings are consistent with prior research indicating that *assertiveness* significantly influences employee performance, communication effectiveness, and leadership effectiveness (Ames, 2009; Zhou et al., 2024). Ames (2009) and Zhou et al., (2024) argue that developing assertiveness skills can lead to positive work outcomes. Moreover, the overlap in definitions between assertiveness and sociability dimensions also supports the observed positive relationship between these dimensions.

Regression analysis further revealed that among the 18 dimensions of the shapes (management), dimensions such as *directing*, *persuasive*, *systematic*, *autonomous*, *behavioural*, *socially confident*, *agreeable*, *competitive*, and *prudent* collectively accounted for 28% of the variance in the *assertiveness* dimension. Notably, the *directing* dimension exhibited the strongest positive correlation with assertiveness.

5.1.7 Discussion of the Hypotheses Related to the Liveliness Dimension

Table 9 reveals a significant positive relationship between the ADEPT-15 *liveliness* dimension and the *directing* ($r = .19$, $p = .01$), *persuasive* ($r = .20$, $p = .01$), and *sociable* ($r = .48$, $p = .01$) dimensions of the shapes (management). These findings align with the hypotheses: H7a, which anticipated a positive relationship between *liveliness* and the *directing* dimension, is supported, as is H7b, predicting a positive link between *liveliness* and the *socially confident* dimension. Additionally, H7c, which expected a positive relationship between *liveliness* and the *sociable* dimension, is also supported. These findings align with expectations, as the *liveliness* dimension corresponds to the extraversion trait in the FFM. Extroversion literature suggests that individuals high in extraversion tend to be assertive, and comfortable in leadership roles (Benoliel & Somech, 2014; Bertsch et al., 2017). These individuals are also likely to be more outgoing, and open to socialising with others and building interpersonal relationships (Benoliel & Somech, 2014; Bertsch et al., 2017).

The regression analysis further revealed that among the 18 dimensions of the shapes (management), dimensions such as *sociable*, *socially confident*, *directing*, *competitive*, *persuasive*, and *agreeable* collectively explained 31% of the variance in the *liveliness* dimension. Notably, the *sociable* dimension exhibited the strongest positive correlation with the *liveliness* dimension, consistent with expectations.

5.1.8 Discussion of the Hypotheses Related to the Cooperativeness Dimension

Hypotheses H8a and H8b examined the relationship between the ADEPT-15 *cooperativeness* dimension and the shapes (management) *sociable* and *agreeable* dimensions, respectively. H8a anticipated a positive relationship between *cooperativeness* and the *sociable* dimension, while H8b predicted a positive relationship between *cooperativeness* and the *agreeable* dimension. A positive, statistically significant, correlation was observed between the *cooperativeness* dimension and the *sociable* ($r = .21, p = .01$) and *agreeable* ($r = .29, p = .01$) dimensions. This provided statistical support for hypotheses H8a and H8b. Research on teams (e.g., Bradley et al., 2013; Cogliser et al., 2012; Curşeu et al., 2019) highlights the significant role of agreeableness in enhancing team performance. Agreeable individuals tend to prioritise team collaboration, demonstrating openness to working with others and receptiveness to their ideas and suggestions.

The regression analysis further revealed that among the 18 dimensions of the shapes (management), dimensions such as *agreeable*, *socially confident*, *autonomous*, *directing*, and *behavioural* collectively explained 17% of the variance in the *cooperativeness* dimension. Notably, the *agreeableness* dimension showed the strongest positive correlation with *cooperativeness*, which is in line with expectations.

5.2 Limitations and Suggestions for Future Research

As with any research, this study has several limitations that should be acknowledged. A significant limitation is the potential selection bias introduced by the sample, which consisted of individuals who completed the ADEPT-15 for training purposes rather than under high-stakes conditions. The training program was designed for accreditation purposes, with attendees earning Continuing Professional Development (CPD) points. Although it is assumed that respondents provided honest and accurate feedback to receive meaningful insights, it is plausible that some may not have given the assessment the warranted attention due to the lower stakes involved. This unknown factor could have influenced the results, potentially limiting the generalisability of the findings to other scenarios with higher stakes.

Another limitation is the non-probability sampling method, which restricts the generalisability of the results. The sample may not be representative of the broader South African working population, particularly considering the demographic breakdown. For instance, the gender distribution was skewed, with a majority of the sample being female. This imbalance may limit the applicability of the findings across the entire working population. It is

imperative that future research adopts probability sampling techniques to better represent the diverse demographics of South Africa's workforce, thereby enhancing the applicability of the findings.

Another limitation is the study's cross-sectional design, which prevents the establishment of causality. While the primary goal was to investigate the psychometric properties of the ADEPT-15 and its shapes (management) dimensions, the lack of an experimental or longitudinal design means that causal relationships cannot be inferred. Future studies could benefit from employing longitudinal designs or controlled experiments to explore these relationships more robustly.

Additionally, the study faced time and resource constraints that limited the scope of construct validation. Only a single validation study was conducted, which may not fully capture the ADEPT-15's applicability across different contexts. Although the sample size was substantial, it is recommended that future research conduct multiple validation studies with varied samples, including those that more closely mirror the demographic diversity of South Africa's working population. This would provide a more comprehensive understanding of the ADEPT-15's psychometric properties.

Future research should also explore advanced statistical techniques to further validate the ADEPT-15 within the South African context. Techniques such as measurement invariance studies could assess whether the instrument measures the same constructs across different groups, while Item Response Theory (IRT) and Confirmatory Factor Analysis (CFA) could provide deeper insights into the questionnaire's dimensionality and item functioning. These approaches would enhance the robustness and reliability of the findings, making the ADEPT-15 a more versatile and credible tool for personality assessment in diverse settings.

5.3 Implications of the Present Study

Given that the ADEPT-15 is a newly developed personality measure, there is a scarcity of validation studies investigating its effectiveness in measuring the intended constructs within the South African context. This research contributes to the existing literature on personality assessments by demonstrating that the ADEPT-15 can be a reliable and valid measure of personality in South Africa.

The findings suggest that the ADEPT-15 has the potential to be a valuable tool in various applied settings, such as organisational psychology, recruitment, and personal development. For practitioners, these findings have important implications. The ADEPT-15

could be particularly useful within South African organisations for purposes such as recruitment, where understanding a candidate's personality profile can inform selection decisions. Additionally, the tool could be valuable in training and development contexts, helping organisations tailor programs to individual personality traits, thereby enhancing employee engagement and effectiveness. However, practitioners should be mindful of the study's limitations, particularly regarding the sample's representativeness and the potential for selection bias due to the non-high-stakes context in which the assessments were completed. When applying the ADEPT-15 in different organisational contexts, it is crucial to consider these factors to ensure the tool's effectiveness.

Future validation efforts should focus on ensuring that the ADEPT-15 is applicable across various demographic groups within South Africa's diverse workforce. Broadening the scope of validation studies to include various cultural and linguistic groups will strengthen the instrument's reliability and relevance, making it a more robust tool for personality assessment in a wide range of organisational settings. Ultimately, this study highlights the potential of the ADEPT-15 as a robust tool for personality assessment within the South African context. By encouraging more extensive validation efforts, the findings pave the way for the broader adoption of this measure across different fields and industries, enhancing its credibility and utility in both academic and applied settings.

Chapter 6

6. Conclusion

The primary objective of this dissertation was to evaluate the construct validity of the Adaptive Employee Personality Test (ADEPT-15) within the South African context, specifically by examining its convergent validity with the shapes (management) questionnaire developed by Aon Assessment Solutions. This study was motivated by the critical need to ensure that psychometric assessments used in South Africa are both accurate and fair, given the country's unique socio-cultural landscape and historical context.

The present study sought to address the research question of whether the ADEPT-15 questionnaire effectively gauges the same constructs as the shapes (management) questionnaire. The analysis yielded compelling findings indicating a significant relationship between the dimensions of the ADEPT-15 and those of the shapes (management) questionnaire, albeit with varying degrees of shared variance. Notably, the collective variance across the ADEPT-15 dimensions accounted for by the subsets of the shapes (management) dimensions averaged 17.13%, with a range from 4% for the ADEPT-15 *awareness* dimension to 32% for the ADEPT-15 *conceptual and power* dimensions. These results indicate that while there is some overlap, the ADEPT-15 captures distinct constructs not entirely measured by the shapes (management) questionnaire.

From an ethical perspective, these findings have important implications. In South Africa, the use of psychometric assessments must comply with strict ethical standards to ensure they are not biased and are fair to all candidates. By demonstrating that the ADEPT-15 measures constructs similar to those of the well-established shapes (management) questionnaire, this study supports the ethical use of the ADEPT-15 in South African organisational settings. The shapes (management) questionnaire has a long history of use and has been validated in various contexts, making it a reliable benchmark. The ADEPT-15's comparable performance indicates that it is a psychometrically sound tool that can be confidently used for talent management purposes in South Africa.

This research has significant implications for organisational leaders and HR professionals. The validation of the ADEPT-15 in South Africa provides a robust tool for better hiring, promotion, and development decisions, ultimately enhancing organisational effectiveness. Moreover, this study highlights the importance of continuous validation efforts for psychometric assessments, especially in diverse and evolving cultural contexts.

In conclusion, this dissertation demonstrates that the ADEPT-15 is a valuable and ethically sound tool for assessing employee personality traits in South Africa. By comparing it to the psychometrically sound shapes (management) questionnaire, the study provides strong evidence of the ADEPT-15's validity and reliability, reinforcing its effectiveness. Future research should continue to explore and validate other international assessments to ensure their appropriateness and fairness in the South African context, thereby contributing to more equitable and effective talent management practices.

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Appendix A

Ethics Documents

Figure A1

Participant Research Consent

WELCOME

Welcome to the online assessment platform administered by TTS – Top Talent Solutions. This platform is designed to give you a seamless experience of taking a number of different tests or assessments which your or another organisation has requested you to complete. By accepting the following terms and conditions you agree to proceed with the process and may withdraw at any time.

Please ensure that you read the instructions for each assessment thoroughly before beginning them. There is also other information provided about assessments on this website which you may like to read before completing the assessments.

For more information about TTS please go to our website: www.tts-talent.com

Privacy policy

[Click here to view privacy policy](#)

Check this box to accept the privacy policy.

Honesty contract

Please read through and accept the honesty contract before you continue.

You have been asked to complete online assessment(s).

Read through these terms and declare your honest participation in the assessments before you continue.

I commit that:

- I will be honest and truthful when completing the requested assessments and will not make use of any assistance from others (this includes the use of online search engines, artificial intelligence and any software programmes).
- I will not in any manner copy or record any information from the online assessment(s) that I have been requested to complete.

I understand that:

- I may be disqualified from the rest of the assessment or selection process should it prove that I have not been truthful.
- I will complete a further supervised assessment in order to verify my assessment(s) result if I am asked to do so.

Check the box below to indicate that you commit to these terms, and then click on Continue, to proceed.

Check this box to accept the honesty contract.

[→ Continue](#)

4.2 Personal data and Participating in an Assessment or using TTS Assess

We process Identification Data and Assessment Data provided in relation to your Participation in Assessments for the purpose of providing Services to our Clients. This may include processing this data in order to:

- identify your Assessment and responses;
- assess your aptitudes and preferred working styles;
- produce Assessment reports for our Client who has made this Assessment available to you.

We may process Personal Data for research purposes. We analyse responses to in terms of demographic variables such as gender, age and cultural background over time; this is

considered best practice and allows us to monitor and improve our Assessments for fairness in use, create benchmark data and validations studies.

The Research Data that we collect goes through the process of aggregation and/or anonymisation. The Research Data will be anonymised unless otherwise instructed by Clients in order to use group data as part of their talent management strategies. Personal data will not be individually disclosed to any third parties not covered in a contractual service agreement and contractual relationship.

We may also process your personal data for the purposes of using and refining Assessment tools, analysis, accounting, billing and audit, administration, enforcing and defending legal rights, systems testing, maintenance and product development, performing our obligations to Participants and Clients whether under contract or otherwise, and to help us in future dealings with you.

The Assessment reports and services we provide to our Clients may be used by them for purposes which may include the selection and development of individuals in an employment or human resources context. We may also provide a copy of the Assessment Data to our Clients for use by them for their own internal human resource management purposes. Clients are entitled to use the personal data that we provide to them as part of our Services for their own internal business purposes.

Such Clients are obliged to process your personal data in accordance with their own obligations under applicable country specific Data Protection Laws.

Figure A2

TTS-Top Talent Solutions Research Confidentiality Agreement



Research Confidentiality Agreement

This Agreement is made and entered by and between:

TTS-Top Talent Solutions (Pty) Ltd
 Registration number: 2012/081177/07
 Address: Suite 6-102, Monument Office Park, 79 Steenbok Ave, Monument Park, 0181,
 Pretoria, RSA
 (hereinafter referred to as the "First Party")

and

Name or Company name, address, and registration number:

Simbarashe Teveera

ADDRESS: 24 PARK CENTRAL, PARK STREET, PRETORIA, 0082

(hereinafter referred to as the "Second Party").

1. Recitals

Please note: This Research Confidentiality Agreement pertains specifically to internal/institution-based research purposes (i.e. within the institution of the Second Party's employer, or within the institution of the Second Party's Client, or within the Second Party's own institution), examples include, but are not limited to, data analytics, validation research, correlational research, or any other research-based activities. For the release of data, the **Authorisation for the Release of Personal or Sensitive Data** form will need to be completed and accompany this Agreement.

Important: The First Party cannot authorise research being conducted without the Second Party's agreement to this Research Confidentiality Agreement.

The Second Party has requested to conduct internal/institution-based research using confidential information divulged by the First Party. This confidential information includes, in particular, (1) data/research information from the First Party that may contain personal or sensitive candidate and/or First Party Client Company data and/or (2) assessment results from scales and dimensions of the First Party which may be the intellectual property of the Test Owners/Publishers.

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Party shall remain responsible to the First Party for the performance of such services in accordance with the terms of this Agreement. All sub-contracting parties will be required to sign a Research Confidentiality Agreement in their name.

I, as the authorised representative of the Second Party, hereby confirm the acceptance of the terms and conditions set out above.

Name of Representative	SIMBARASHEE TEVERA
Job Title	CONSULTANT
Email Address	SIMBARASHEE.TEVEERA@TTS-TALENT.COM
Contact Number	0781204216
Signature	
Date	06/10/2023

If the data that is requested include Psychological Constructs, as measured by assessment instruments registered with the HPCSA, the contact details of the responsible Psychologist for the data and interpretation of the results would also need to be specified.

Name of Accountable Psychologist	Sebastian Clifton
PS Registration Number	PS0127728
Job Title	Management Consultant: Research and Development (Industrial Psychologist)
Email Address	sebastian.clifton@tts-talent.com
Contact Number	012 060 1440
Signature	
Date	2023/10/06

**For Completion by the First Party**

I, as the authorised representative of the First Party, authorise the necessary consent for the proposed internal/institution-based Research Project to be conducted.

Name of Representative	Sebastian Clifton
Job Title	Management Consultant: Research and Development
Email Address	sebastian.clifton@tts-talent.com
Contact Number	012 060 1440
Signature	
Date	2023/10/06

Figure A3

Ethics Approval

Management Studies Ethics Approval: "CONSTRUCT VALIDATION OF THE ADEPT-15 QUESTIONNAIRE IN SOUTH AFRICA"

Dear Simbarashe Tevera,

Thank you for your submission, which has been reviewed and approved following your provision of the correct supervisor's form via email.

Best wishes with your research,

Commerce Ethics in Research

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Submission ID: 34428927

Sent by [Submittable](#).
111 Higgins Ave #300, Missoula, MT 59802

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Management Studies Ethics Application



Signe Rousseau

To: Simbarashe Tevera

Cc: hennie.kriek@tts-talent.com



Wed 1/4/2023 5:55 PM

Dear Simbarashe,

You will hopefully have received a Submittable notification regarding approval of your ethics application.

Best wishes with your research,
Signe

Dr. Signe Rousseau
School of Management Studies
Faculty of Commerce



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