Development and Evaluation of an Organisational Citizenship Behaviour and Counterproductive Work Behaviour Structural Model

Jayme Inglis

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Supervisor: Dr B. Boonzaier

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DECLARATION

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ABSTRACT

The new competitive landscape has three challenges that organisations need to respond to in order to prevent their decline. These challenges, namely globalisation, technological advance and hyper-competition, can be responded to by ensuring that an organisation has a competitive advantage. This competitive advantage can be gained by manipulating the performance of the human resources in the organisation. Performance has been defined as task performance, counterproductive work behaviour (CWB) and organisational citizenship behaviour (OCB).

Due to the media and large corporate fraud and embezzlement scandals, the CWB aspect of performance has become a topic of interest in research. Research on OCB has also become popular due to its links to organisational performance. Therefore, the objective of this research was to test a comprehensive model of CWB and OCB that had been placed within the framework of the job-demands resources (JD-R) model. The proposed model was tested in the South African context. This research is of importance because a better understanding of the mechanisms that lead to CWB and OCB can be used to better influence behaviour in the workplace and lead to less CWB and more OCB.

The model in this research was placed within the framework of the JD-R and, as such, the theory underlying the JD-R was used to justify the relationships in the CWB and OCB model. The model contained the variables organisational justice, emotional demands, the dark triad, OCB and CWB. The aim of this study was to test this overall model, as well as the relationships among the variables.

An *ex post facto* correlational design was used to test the formulated hypotheses. Quantitative data was collected from 179 South African employees employed in the formal job sector using non-probability convenience sampling. A web-based self-administered survey was distributed to the employees of the organisations that agreed to participate in this research. The measuring instruments consisted of: 1) the Counterproductive Work Behaviour Checklist (CWB-C), 2) Lee and Allen's (2002) OCB scale, 3) the Emotional Demands and Emotion-Rule Dissonance Scale (Bakker, Demerouti, & Schaufeli, 2003), 4) the Short Dark Triad 3.1 (Jones & Paulhus, 2014) and 5) Colquitt's (2001) Organisational Justice scale. The data was analysed using item analysis and structural equation modelling, with partial least squares path

analysis being conducted to determine the significance of the hypothesised relationships.

From the 12 hypotheses formulated in the study, five were found to be significant. More specifically, hypotheses 1, 2, 3, 4 and 10 were found to be statistically significant, while hypotheses 5, 6, 7, 8, 9, 11 and 12 were found not to be statistically significant. These results show that OCB and CWB are in a significant negative relationship, organisational justice is in a significant positive relationship with OCB, the Machiavellianism personality trait is in a significant negative relationship with OCB and, finally, that organisational justice moderates the relationship between emotional demands and CWB.

The findings of the study show the importance of developing and maintaining practical interventions that foster organisational justice with the aim of optimising OCB and minimising CWB.

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CHAPTER 1

BACKGROUND TO THE STUDY

1.1   INTRODUCTION

Organisational citizenship behaviour (OCB) and counterproductive work behaviour (CWB) are discretionary employee behaviours that, along with task behaviour, have been defined as part of job performance (Rotundo & Sackett, 2002). OCB has positive consequences for organisational performance, while CWB has negative ones. However, the question becomes: why is this important or necessary for organisations? The answer is that an increase, in the case of OCB, or a decrease, in the case of CWB, in organisational performance can have far-reaching effects for an organisation in the current economic climate and competitive landscape.

The world of work and the competitive environment have changed dramatically in the 21st century. How this change and its challenges are dealt with or adapted to can have a great effect on an organisation's decline or growth. The challenges to the new working world and the competitive environment are globalisation and increased technological advancement, which lead to hyper-competition (Lahiri, Pérez-Nordvedt, & Renn, 2008).

The unpredictability that globalisation and rapid technological advances have created in the working and competitive environment is a contributing factor to hyper-competition (Lahiri et al., 2008). Hyper-competition comprises fierce competition between organisations and the attempt to offer or have a unique position over one's competition (Lahiri et al., 2008). In this changing and increasingly competitive work environment, it becomes important for organisations to respond appropriately so as to avoid organisational decline. To respond to this competitive environment, it is important that organisations find ways to increasingly create and suitably maintain a competitive advantage.

Therefore, it becomes imperative to discover what influences the performance of an organisation, so that these factors can be leveraged to create better performance by an organisation and therefore a competitive advantage. In a resource-based view of competitive advantage, the organisation's human resources are a valuable resource that can lead to the creation of or increase in an organisation's competitive advantage

(Wright, McMahan, & McWilliams, 1994). One of the ways in which the organisation's human resources add to competitive advantage is through job performance, and the management of that job performance through human resources practices (Wright et al., 1994). Due to the importance of job performance, the next important step is to examine what constitutes job performance.

In the literature, job performance has been loosely defined as behaviours and actions of individuals that lead to the achievement of organizational goals (Rotundo & Sackett, 2002). More specifically, job performance has been defined as task performance, organisational citizenship behaviour (OCB) and counterproductive work behaviour (CWB) (Campbell, 1990, as cited in Rotundo & Sackett, 2002). Task performance is conceptualised as the performance of the technical aspects of one's job (Rotundo & Sackett, 2002). However, researchers have argued that performance is not only task performance, but also includes altruistic behaviours that contribute towards the organisation (OCB), as well as deviant behaviours that harm the organisation (CWB) (Rotundo & Sackett, 2002). Therefore, it becomes apparent that the discretionary behaviour (OCB and CWB) of employees is of importance to organisations, as it is part of individuals' performance that has an influence on the organisation's performance. These two aspects of performance therefore need to be examined.

1.2   COUNTERPRODUCTIVE WORK BEHAVIOUR – A DEFINITION

CWB has received a large amount of attention in research, largely due to the media attention given to violence in the workplace, white collar crime and large-scale fraud, along with the monetary costs of certain types of deviant behaviour (Bennett & Robinson, 1995; Fox & Spector, 2005). Counterproductive behaviour is largely defined as intentional behaviour that violates the norms of an organisation and threatens the organisation and its members (Bennett & Robinson, 1995). CWB is an important issue to take note of when the costs to the organisation that counterproductive behaviours incur are considered.

CWB is a multidimensional construct and includes many different behaviours that are placed under the umbrella of the construct and, as such, has a varying array of costs, each based on the nature of the particular counterproductive behaviour. For example, fraud in the workplace has lead to more than 7 billion US dollars in total costs in 2018

(Association of Certified Fraud Examiners, 2018). CWB causes many costs to an organisation, both monetary and otherwise, that will be explored as the behaviours that make up the construct of CWB are explored. Overall, the various costs of CWB have a negative effect on an individual's job performance, as well on as the organisation's performance, which will effect and decrease an organisation's competitive advantage. Therefore, it is important to explore the various aspects that make up CWB to gain a better understanding of what exactly CWB is and what its costs to the organisation are.

Research into CWB is relatively new and, is to an extent, divergent in its focus, categorisations and causes, and even the term CWB is not always used. CWB is sometimes used interchangeably with words such as deviant workplace behaviour (Bennett & Robinson, 1995), organisational delinquency (Hogan & Hogan, 1989) and organisational misbehaviour (Richards, 2008). Despite the different names and slightly different definitions, the main aspect of intentional violation of norms remains.

In the literature there is an abundance of information on different types of behaviours that constitute CWB, and many different categorisations of those behaviours into dimensions of CWB. Spector et al. (2006) categorises counterproductive work behaviours into five dimensions: abuse against others, production deviance, sabotage, theft and withdrawal. Martinko, Gundlach, and Douglas (2002) use previous research to construct a causal reasoning model in which counterproductive behaviours are classified as self-destructive or retaliatory. Other research has classified CWB behaviour into a paradigm that fits into four cells that fall on the two continuums of minor versus serious and organisational versus interpersonal (Bennett & Robinson, 1995). Some research has focused only on new, specific types of counterproductive behaviour without focusing on the definition of the construct as a whole. An example of this is the research into counterproductive knowledge-sharing behaviour, which examines when employees purposefully withhold information (Serenko & Bontis, 2016). Gruys and Sackett (2003) focused on a construct definition and examined 11 categories of CWB that fit onto two dimensions – the organisation-interpersonal dimension and the task-relevance dimension.

These 11 categories are theft and related behaviour, destruction of property, misuse of information, misuse of time and resources, unsafe behaviour, poor attendance, poor quality work, alcohol use, drug use, inappropriate verbal actions and inappropriate physical actions (Gruys & Sackett, 2003). It can be seen that there is little agreement on the categorisation of the behaviours and dimensions of CWB. Perhaps it is best when examining CWB to define it via its general definition, and then conceptualise all the behaviours mentioned in the previous research as examples of different types of counterproductive behaviours, rather than an exhaustive list. Research has supported this stance, as it has shown that all CWB behaviours correlate with each other (Gruys & Sackett, 2003) and that there is a higher-order factor that all CWB factors load onto (Marcus, Taylor, Hastings, Sturm, & Weigenlt, 2016). CWB is broadly defined as intentional acts that violate the norms of the organisation and pose a risk to the organisation and its people (Spector & Fox, 2002). This definition will include all behaviours mentioned in the previous research and any not yet mentioned.

1.3   ORGANISATIONAL CITIZENSHIP BEHAVIOUR – A DEFINITION

Like CWB, OCB has many definitions and understandings in the research. However, there is a universal definition of OCB that says it is discretionary behaviour that is not enforced or rewarded by the organisation but has a positive influence on the organisation (Organ, 1988, as cited in LePine, Erez, & Johnson, 2002). OCB is essentially behaviour that enhances the situation in the work environment and supports task performance (Organ, 1988, as cited in LePine et al., 2002). In a different study, OCB is defined as cooperation, which is further defined as pro-social behaviours that include the consideration of the needs of others in the workplace (Smith, Organ, & Near, 1983).

The dimensions of behaviours that exist under OCB are also numerous when using such a broad definition, but Organ (1988, as cited in LePine et al., 2002) created five dimensions that are used to define OCB behaviour. These dimensions are altruism, conscientiousness, sportsmanship, courtesy and civic virtue (Organ, 1998, as cited in LePine et al., 2002). Examples of OCB are when a person stays late to finish work when not asked to, or helps co-workers (Feather & Rauter, 2004). More recent research has focused on different dimensions of OCB, for example, voice (Mullen, 2018), organisational directed OCB and individual directed OCB (Takeuchi, Bolino,

& Lin, 2015). Like CWB, these dimensions of OCB behaviour are not universally used in all OCB research, but rather there are many varying ideas. These dimensions therefore are rather used for demonstration purposes, rather than as part of a concrete definition of OCB.

1.4   COUNTERPRODUCTIVE WORK BEHAVIOUR – EXAMPLES AND COSTS

For the purpose of examining the costs of CWB, it is necessary to examine specific behaviours, and therefore a list of behaviours from previous research was investigated. It is important to remember that these are just examples and not an exhaustive list of possible counterproductive behaviours. To this end, Spector et al.'s (2006) five dimensions were used, as they are a succinct, simple and broad categorisation of behaviours. As previously mentioned, these five dimensions are abuse against others, production deviance, sabotage, theft and withdrawal.

The first domain, abuse against others, includes any behaviour, physical or verbal, that harms others, for example bullying, spreading rumours and sexual assault (Spector et al., 2006). This will not have a direct monetary cost to the organisation but could have costs in the form of decreased work performance or turnover of harassed employees. Evidence of this was found in a study conducted in the nursing field. This research found that harassment at work led to higher levels of burnout and turnover intentions (Deery, Walsh, & Guest, 2011). Research into the consequences of bullying in the workplace found that those bullied suffered from sleep disturbances, distress, fatigue, depression, anxiety, health complaints and absenteeism (Sansone & Sansone, 2015). This could lower the productivity of the affected employees. This lower production and high turnover costs could translate into monetary costs, as unproductive workers lead to an unproductive organisation that would not fulfil its earning potential. If employees leave, new employees need to be found and trained, which would also cost the organisation money in terms of recruitment, selection and training costs, and in terms of lost productivity.

The second domain is production deviance, and this includes behaviours that result in the purposeful ineffectual performance of job tasks, such as wasting resources or working slowly (Spector et al., 2006). The most common form of production deviance found in organisations was, intentionally working slowly (Edralin, 2015). Behaviour

such as this will cost the organisation in terms of lost productivity. The third domain is sabotage, which includes any behaviour that leads to the vandalism or destruction of property owned by the employer (Spector et al., 2006). This will cost organisations money to repair or replace the damaged property. The fourth domain is theft, and this includes the taking of things belonging to others in the organisation or belonging to the organisation itself (Spector et al., 2006). Theft behaviour can be anything as small as stealing stationery to something as big as embezzling money from the organisation; either way it will have a cost to the organisation. A study on occupational fraud, fraud committed against the organisation by its employees, showed that in 2018, the median loss per case was 130,000 USD (Association of Certified Fraud Examiners, 2018).

The last domain, withdrawal, includes any behaviour that results in working less time than required by the organisation, such as absenteeism, tardiness or leaving early (Spector et al., 2006). This again affects the productivity of the organisation and has a cost to the organisation in terms of time paid for in salaries that is not worked. These examples all demonstrate the real costs that CWB can have for the organisation. These examples provide a limited number of counterproductive behaviours that can take place in organisations, and many other behaviours can occur with similar or unique costs to the organisation. The costs of each example have not been fully explored, as certain behaviour can have hidden costs that are not immediately noticeable. For example, when there is workplace bullying, there is the obvious cost of turnover of the victim, who is costly to replace, but there is also a hidden cost in the creation of a negative work environment that may lower the performance of all employees in that work unit (Rayner & Keashly, 2005).

CWB does not only have an individual effect on a victim or object, but can also have a collective effect in the form of lowered unit-level performance. Research has shown that the overall level of CWB in a work unit can have an effect on the overall performance of the work unit (Dunlop & Lee, 2004). This demonstrates the necessity for understanding CWB so that it can be controlled and reduced in organisations to decrease the costs incurred and its detrimental effect on the overall competitive advantage of the organisation.

1.5 ORGANISATIONAL CITIZENSHIP BEHAVIOUR – EXAMPLES AND ADVANTAGES

As in the case of CWB, it is important when examining how OCB is advantageous to organisations to look at specific examples of OCB and their related outcomes. It is also important to note that this is not an exhaustive list, but rather some examples. These examples are based on the three dimensions of OCB, namely helping, sportsmanship and civic virtue, as explained by Podsakoff and MacKenzie (1997) in their meta-analysis.

An example of helping behaviour would be employees showing new employees 'the ropes' so that they are effective in their jobs more quickly (Podsakoff & MacKenzie, 1997). This will help the productivity of that individual employee, as well as the productivity of the organisation, as less time is spent paying an employee a full wage when he/she is not at full capacity. Helping others can also spread best practices around the unit or organisation (Podsakoff & MacKenzie, 1997). This would also help increase the performance of individuals and the organisation, as employees are doing work in the most effective ways. Helping behaviour from fellow employees also helps alleviate the pressure on managers to manage lower performing employees, so that they can rather concentrate their efforts on other necessary areas (Podsakoff & MacKenzie, 1997).

OCB has been linked to other positive outcomes, such as, team effectiveness (Mahembe & Engelbrecht, 2014). This would be helpful to an organisation as less time would be wasted in conflict and conflict management, and this will also create trust and a cooperative atmosphere in the unit. Teams will also perform more effectively, which will ultimately increase the performance of the organisation. The overall atmosphere created by having OCB in an organisation will also help attract and retain individuals, as OCB can help enhance a sense of belonging, as well as a sense of cooperation (Podsakoff & MacKenzie, 1997). The conscientiousness and helpfulness of employees engaging in OCB will also help ensure a constant level of performance, as employees will help 'pick up the slack' when there are times of lower performance or increased pressure (Podsakoff & MacKenzie, 1997).

The study by Podsakoff and Mackenzie (1997) also shows that previous research has generated empirical evidence that OCB does have an impact on organisational

performance. This evidence, along with the specific examples of how OCB can improve performance, demonstrates that OCB is important in relation to the performance of an organisation.

1.6   COUNTERPRODUCTIVE WORK BEHAVIOUR AND ORGANISATIONAL CITIZENSHIP BEHAVIOUR IN SOUTH AFRICA

The discussion of CWB and OCB thus far has been in relation to the international and general situation, therefore an important question is: how relevant are CWB and OCB in South Africa? CWB and OCB have a particular importance in South Africa when considering the country's position in the Global Competitiveness Report, as well as the idea that CWB and OCB have a large-scale effect on the competitive advantage of South Africa's economy, as well as smaller scale effects on South African organisations. In the Global Competitiveness Report 2017-2018 (Schwab, 2017), South Africa's overall competitiveness is ranked 61 out of 137 countries. This is a positive statistic for South Africa, as its global competitiveness is relatively good. On the basis of this ranking, the next question to consider is what factors are causing the country's competitiveness to be lower than 60 other countries? There are many contributing factors, but the ones of interest in the context of CWB and OCB are three of the 16 most problematic factors for doing business in South Africa: restrictive labour relations, corruption, and crime and theft, as well as South Africa's score of 99 out of 137 for productivity.

When looking at South Africa's rankings for labour market efficiency, it becomes apparent that this is a problem for the country's competitiveness. South Africa's rank is 125 and 99 out of 137 countries on hiring and firing practices and pay and productivity respectively (Schwab, 2017). In relation to CWB, this is a problem, as organisations' productivity is already low, meaning that if an organisation is affected by CWB, this will lower the production level of an already unproductive workforce. Alternatively, the low productivity of the workforce could be due partially to production-based or withdrawal-based CWB, where employees are not performing as required. This is also of importance when considering that OCB is understood to enable task performance (Podsakoff & MacKenzie, 1997), and therefore having high

levels of OCB may be a necessary solution for South Africa's low level of productivity.

Another part of the labour market efficiency problem is the strict hiring and firing practices, which have an effect in terms of an employer's inability to immediately get rid of employees involved in CWB. According to South African labour legislation, a disciplinary procedure must be held before a person can be dismissed and, unless the transgression is one of gross misconduct, an employee cannot be asked to leave the organisation immediately, but rather has to be given a notice period (Finnemore, 2009). The result of this is that employees who engage in counterproductive behaviour that is not classified as gross misconduct will not be dismissed immediately, and as such may continue to cost the organisation in terms of repeat offenses and a negative work environment for others.

Another problem particular to South Africa is the high business costs of crime, violence and theft, with a ranking of 133 (Schwab, 2017). This ranking represents both employee and non-employee crime against businesses. A report on organisation directed fraud showed that of the 32 participating sub-Saharan countries, South Africa had the most reported fraud cases (Association of Certified Fraud Examiners, 2018). Employee-enacted crime could indicate that CWB is already a big problem in South Africa. This is a problem for South African businesses, at it will have a high monetary cost on the organisation's bottom line. Violence is a particular problem in South Africa due to the country's political history, along with the lack of resources in the country (Percival & Homer-Dixon, 1998). This violence is problematic for organisations when it takes the form of violent, counterproductive work behaviours, for example violent strikes that lead to the destruction of employer property. An example of this from the South African media was in 2013, when South African Breweries (SAB) experienced a violent strike during which other employees' cars and houses, as well as SAB property, were damaged or destroyed (Fin24, 2013). This type of strike violence against the employer or non-striking employees can be classified as counterproductive behaviour, as it is intentional, it violates norms and it can harm the organisation and its employees.

The problem of corruption in South Africa has also been focused on extensively in the media due to the amount of corruption in public and private organisations. According

to the definition of CWB, corruption is also a counterproductive behaviour, as it is intentional, it breaks ethical and business norms and it will harm the organisation, for example in terms of lost profits due to fraud. According to the Global Competitiveness Report 2017-2018 (Schwab, 2017), corruption is the leading problematic factor for doing business in South Africa. Therefore, this type of CWB is of big concern in South African organisations.

While not one of the problematic business factors specified in the Global Competitiveness Report, the high skills shortage in South Africa is also a factor of interest when considering CWB. South Africa has an extremely low quality of education, with a ranking of 114 for the quality of the education system in the Global Competitiveness Report 2017-2018 (Schwab, 2017). This is of relevance when considering the change in the nature of South Africa's economy – from a primary to a service-driven economy (Bhorat, Meyer, & Mlatsheni, 2002). This has resulted in the need for skilled labour. Due to the lack of quality education, there is a lack of supply of skilled labour, creating a skills deficit (Bhorat et al., 2002). This means there is fierce competition for skilled labour in the labour market, and this makes the turnover of employees undesirable, as organisations could be losing their scarce skills. This problem becomes of importance when considering that certain counterproductive work behaviours, such as bullying, can lead to turnover of staff. This gives rise to a loss of scarce skills from the organisation, which can decrease the organisation's competitive advantage because it has lost talent. OCB is also of importance here, as it is sometimes considered a behaviour that creates a positive work environment, as well as trust and cooperation among employees (Podsakoff & MacKenzie, 1997). This means that having higher levels of OCB can help organisations prevent their scarce skills from leaving the organisation because there is a positive work environment. Some OCB behaviours include helping other employees; in the case of South Africa's skills deficit, this can have a positive effect, as employees who are struggling at work due to low skills levels would be assisted by fellow employees, and they thereby can learn the skills necessary to complete the job themselves.

The particular problems presented by CWB in South Africa, due to the country's unique competitive position, and the most problematic types of counterproductive behaviour in South Africa, are detrimental for the country not only in terms of the effect on individual organisation's productivity. As a whole, these problems will also

dissuade foreign investors from investing in South Africa and, as such, effect the competitiveness of the economy of the country. The cost of CWB to organisations, and to South Africa as a whole, highlights the importance of studying this construct with a view to understanding CWB, and then influencing the level of CWB in an organisation. OCB is also of importance because, if leveraged, it could help improve the productivity of organisations, which would help the overall competitiveness of the country and help to increase South Africa's attractiveness to foreign investors.

1.7 ORGANISATIONAL CITIZENSHIP BEHAVIOUR AND COUNTERPRODUCTIVE WORK BEHAVIOUR IN A SINGLE MODEL

The importance of CWB and OCB for an organisation's competitive advantage, as well as their specific implications in South Africa have been explored. However, what has not yet been examined is the combination of OCB and CWB in a single model. Much research has been dedicated to discovering the antecedents for both OCB and CWB. However, only a few studies have focused on understanding CWB and OCB in unison in a model. In the past, CWB and OCB were considered to be polar opposites on a continuum of discretionary behaviour (Dalal, 2005). However, more recently research has shown that they are not opposites, but rather two distinct and separate constructs (Dalal, 2005). This has an implication for research, as OCB and CWB can occur in the same person. Therefore, it would be important to consider exploring a single model that includes both variables to examine the antecedents of the variables, as well as their interactions. Thus, the antecedents of both OCB and CWB were explored in the literature.

For the purpose of leveraging organisational performance, OCB and CWB therefore need to be explored simultaneously, along with their antecedents, to ensure that they are better understood, and therefore to ensure that there are high levels of OCB in an organisation, but low levels of CWB.

1.8 RESEARCH-INITIATING QUESTIONS.

Based on an understanding of OCB and CWB it can be stated that some employees engage in counterproductive work behaviour and others do not, and some engage in organizational citizenship behaviour and others not. Also, some employees engage in more CWB than others and, some engage in more OCB than others. The following

research-initiating question is thus the driving force behind the study: Why is there variance in CWB and OCB in the workplace?

1.9   RESEARCH OBJECTIVES

Given the research initiating question, the predominant aim of this study is to develop a nomological network of the most salient variables influencing the CWB and OCB of employees. In such manner a structural model will be presented for testing. Therefore, the objectives of the study include the following:

a.   to develop a conceptual model that depicts the complex dynamics of the most salient variables/psychological processes proposed to explain variance in CWB and OCB in the workplace; and

b.   to determine the strength of the influence of these salient variables on CWB and OCB in the workplace; thus, to test the fit of the proposed model and to assess the significance of the different hypothesised paths.

1.10   CHAPTER OUTLINES

Chapter 1 introduces the topic of CWB and OCB in the broader context, as well as in a South African context. This chapter also contains a short overview of what CWB and OCB are, the importance of this research, the purpose of this study and the research-initiating questions.

Chapter 2 includes an in-depth look at the variables CWB and OCB, and what past research has shown about the topic. This exploration led to a focus on the variables that were examined in this study, as well as the relationships among them. These variables were defined and the past literature on them, as well as their relationships with the other variable, are explored. The chapter concludes with a theoretical model.

Chapter 3 details the research methodology that was used. The chapter also includes the hypotheses that were tested, along with a structural model. The research design, participants, measuring instruments, missing values, statistical analyses and ethical concerns are also presented.

Chapter 4 discusses the results derived from the statistical hypotheses. The results from the item analysis and the partial least squares (PLS) analysis are discussed in this

chapter. Due to concern over a lack of measurement accuracy, a subsection of the Dark Triad measure was removed. This chapter details the investigation into the subsection, its removal and the subsequent re-writing of the hypotheses and re-drawing of the structural model. The hypotheses were then interpreted based on the results.

Chapter 5 covers the practical and managerial implications that arise from the results of this study, as well as the limitations of the study and the imperatives for future research.

CHAPTER 2

LITERATURE STUDY

2.1 INTRODUCTION

As previously explored, there has been great interest in CWB and OCB in the past few decades due to CWB's costs to business and its presence in the media, and OCB's advantages to an organisation. Due to their popularity, extensive research has been done on the topics of CWB and OCB. This has resulted in many different ideas on what exactly CWB and OCB are and what causes them. As a result, CWB and OCB are complicated constructs to study, as they are topics with many different ideas that at times contradict or support each other, and sometimes do not cover the same subjects. As the previous definition states, the best way to understand CWB is in the broad sense – as intentional acts that violate the norms of the organisation and pose a risk to the organisation and its people (Fox & Spector, 2005). The best way to understand OCB is also in the general sense – as directional extra-role behaviour, not formally rewarded, that positively influences the organisation (Smith et al., 1983).

2.2 A GENERAL DEFINITION OF COUNTERPRODUCTIVE WORK BEHAVIOUR

However, despite the usefulness of the single definition, there has been a certain school of thought that has subdivided counterproductive behaviours further into two dimensions. These dimensions have been defined as organisationally and interpersonally directed CWB (Robinson & Bennett, 1995). Other research has subdivided CWB into mainly two different dimensions – the interpersonal-organisational and task variance dimensions (Gruys & Sackett, 2003). Despite these definitions, not all studies of CWB apply them. Therefore, past research has reached a point where there is disagreement on whether a single or dimensional definition is best. For the purpose of this study, it is argued that the single definition is best. The reason for this definition being chosen is that, while there is evidence of the dimensionality of CWB, the all-encompassing definition would include all types of CWB and all dimensions. This means that the dimensions are not being excluded, but rather become part of the more general definition for CWB.

This broad definition allows for the categorisation of all previously studied and unstudied acts that can be considered CWB. This definition then covers all possible counterproductive behaviours. The permissibility of the use of this broad definition in research without further specification can be argued for via research results from previous studies. The results from one study show that all types of counterproductive work behaviours correlate to a certain extent, and these results were used to demonstrate that, as the likelihood of engaging in one type of counterproductive work behaviour increases, so does the likelihood of engaging in any other (Gruys & Sackett, 2003). A meta-analytic study showed that a single higher-order factor underlies the various aspects of CWB (Marcus et al., 2016). Data was also tested to find the best-fitting structural model, and the results showed that there was less support for a hierarchical model or one with fewer factors (Marcus et al., 2016). This suggests that CWB has an underlying, single higher-order factor for a general level, and a complex set of facets on a more specific level (Marcus et al., 2016). Therefore, on a general level, all facets of CWB are related and share a single higher-order factor. This leads to the conclusion that, as all counterproductive behaviours are to a certain extent related, there is no need to subdivide the construct, because they are related and the same process should be able to elicit all types of CWB.

2.3   A GENERAL DEFINITION OF ORGANISATIONAL CITIZENSHIP BEHAVIOUR

As in the case of CWB, there have been many different definitions of what behaviours constitute OCB, as well as many disagreements about its definition. More recently, a broad, universal definition of OCB has been used that defines OCB as directional extra-role behaviour, not formally rewarded, that positively influences the organisation (Smith et al., 1983). This broad definition of OCB will be used in this study, and other research has also advocated for its permissibility. A meta-analysis was used to show that there are strong relationships between the different proposed dimensions of OCB (LePine et al., 2002). This meta-analysis showed that the five dimensions explained by Organ (1988, as cited in LePine et al., 2002) were all demonstrating slightly different variations of the same thing, and therefore that they all measure a single construct of OCB (LePine et al., 2002). Research into OCB among teachers also showed OCB as a single factor construct in a school setting (DiPaola & Tschannen-Moran, 2014). The argument for the usefulness of using a

single definition of OCB is the same as the one for the use of a single definition of CWB. This argument stated that the use of a single, broad definition includes the various dimensions and definitions of OCB, and therefore is useful as it is all inclusive.

2.4 THE FRAMING OF COUNTERPRODUCTIVE WORK BEHAVIOUR AND ORGANISATIONAL CITIZENSHIP BEHAVIOUR

The broad definitions of OCB and CWB cover the aspects of the manifestation of CWB and OCB, or rather what behaviours are defined as CWB or OCB. However, they do not include how CWB and OCB are framed. The trend in more recent research is to define CWB in terms of a framework or typology. However, there is again disagreement on the different ways to frame CWB. The three main arguments have been that CWB is an emotional response to stress in the workplace (Fida, Paciello, Tramontano, Barbaranelli & Farnese, 2015; Fox & Spector, 1999, 2005; Smoktunowicz et al., 2015), that CWB is a reaction to organisational injustice (Chang & Smithikrai, 2010; Greenberg, 1990; Saleem, & Gopinath, 2015), and that it is a result of individual factors, mainly personality-related factors (Mount, Ilies, & Johnson, 2006; Palmer, Komarraju, Carter & Karau, 2017). OCB is framed slightly differently and is explained as a reaction to either the workplace environment, for example leadership style, or personal factors (Coxen, van der Vaart & Stander, 2016; Mahembe & Engelbrecht, 2014; Smith et al., 1983).

The main focus of the emotional response framing of CWB is that certain contextual factors at work will cause stress, and CWB is a response to those stressful situations (Spector, 1998, as cited in Fox, Spector, & Miles, 2001). The main focus of these studies has been CWB as a response to the frustration of stressors at work (Penney & Spector, 2005). In the emotional framework the main causes of stress that leads to CWB are situational constraints, interpersonal constraints (Penney & Spector, 2005), control, autonomy (Fox et al., 2001) job demands and job burnout (Smoktunowicz et al., 2015) A main aspect of this framework is the impact of emotions. Emotions are seen as very important, as they affect people's actions and perceptions, and past research has proven the mediating role of emotions between stressors and CWB (Fox & Spector, 1999). A more recent study has shown the importance of emotions when considering CWB, as it showed that emotions like envy at work also predict CWB

(González-Navarro, Zurriaga-Llorens, Olateju, & Llinares-Insa, 2018). This emphasises the importance of emotions and their link to CWB. This is similar to an understanding of OCB that says that moods or emotions (which are personal factors) are related to OCB (Smith et al., 1983). Lee and Allen (2002) found that individually directed OCB was affected most noticeably by positive emotional effects at work, while positive cognitions (for example, perceptions of justice) were related to organisationally directed OCB. This speaks to the importance of emotions as well as organisational justice.

CWB has also been defined as a reaction to organisational injustice, namely distributive, procedural and interactional injustice. Research has also framed OCB as a reaction to organisational justice (Moorman, 1991). In this case, organisational justice would be an environmental factor that leads to OCB. Organ (1988, cited in LePine et al., 2002) suggests that the reason organisational justice and OCB are related is that organisational justice helps develop the levels of trust needed for employees to want to engage in non-required work behaviours. Trust has been shown to be an important factor that leads to OCB (Mahembe & Engelbrecht, 2014). Other research has suggested that organisational justice is necessary for OCB, as it creates the prerequisite for an exchange as explained by social exchange theory (Konovsky & Pugh, 1994).

Distributive justice is concerned with the fair and equitable distribution of rewards or outputs in the organisation (Adams, 1963), while procedural justice is concerned with the fair and consistent administration of compensation or reward procedures (Cropanzano & Randall, 1993, as cited in Cohen-Charash & Spector, 2001). Interactional justice is defined as information sharing and participative decision-making (Chang & Smithikrai, 2010).

The reason distributive justice is important is due to equity theory, which states that individuals compare their input-output ratio to referent others and, if they feel it is not equal, actions will be taken to reintroduce equilibrium (Adams, 1963). This theory has been applied to CWB in the way that a perceived lack of justice in the organisation leads to retaliation in the form of CWB. Given South Africa's high Gini coefficient (Lehohla, 2017), organisational injustice may be of great importance. It is important to note the mediating role that perceptions play in this framework.

Organisational justice is judged in terms of people's perceptions of the justice in the organisation, and not of objective justice (Greenberg, 1987). This is easily demonstrated when considering equity theory as previously discussed, where individuals subjectively judge if their input-output ratio is equitable. Therefore, in this framework, the focus is on the perceptions of organisational justice, rather than on an objective measure of organisational justice.

Lastly, individual differences have been researched as the cause of CWB, mainly in the form of personality. The five-factor model (FFM), as well as the HEXACO personality traits, have been the main focus in relation to CWB. All of the FFM personality traits have been linked to CWB in the case of neuroticism, either in a negative relationship or in a positive relationship (Bolton, Becker, & Barber, 2010). In terms of HEXACO, one study argues that the honesty-integrity personality trait is related to CWB in a negative relationship (Marcus, Lee, & Ashton, 2007). In personality research related to CWB, the focus has mainly been on integrity testing for selection in organisations (Ones, Viswesvaran, & Schmidt, 1993). More recent personality research has linked CWB to the dark triad personality traits (Palmer et al., 2017). OCB has also been linked to personality in past research. More specifically OCB has been linked to the two FFM factors agreeableness and contentiousness (Organ & Lingl, 1995).

Overall, there are merits in the different framings of OCB and CWB, and research has proven each of these different aspects (Chang & Smithikrai, 2010; Coxen et al., 2016; Fida et al., 2015; Fox & Spector, 1999, 2005; Greenberg, 1990; Mount et al., 2006; Konovsky & Pugh, 1994; Lee & Allen, 2002; Mahembe & Engelbrecht, 2014; Moorman, 1991; Organ & Lingl, 1995; Palmer et al., 2017; Smith et al., 1983; Saleem, & Gopinath, 2015; Smoktunowicz et al., 2015). It can therefore be argued that they are not opposing frames of reference, but rather all part of the same mechanism that makes up CWB and OCB. Research has also been done that links these frames of reference. For example, Fox et al. (2001) did a study to examine the relationship between CWB, work stressors, organisational justice, autonomy and emotions. Similarly, research has been done that has looked at the environmental impact on OCB in combination with personal factors (Smith et al., 1983).

The purpose of this study was to create an overall comprehensive model of CWB and OCB that more fully explains the mechanisms underlying them, and to test this model in the context of South Africa. To achieve this aim, the model needs to encompass the different frames of reference discussed above in a comprehensive manner. To do this, CWB and OCB are placed in the framework of the job demand resources model (JD-R model).

2.5   THE THEORETICAL FRAMEWORK FOR THE STUDY

The theoretical framework that was used for this study is the JD-R, as proposed and revised by Bakker and Demerouti (2007, 2014). The JD-R is a model that was created to examine employee well-being and, ultimately, the organisational outcome of job performance. The premise of this model is that any job will have both negative aspects (job demands) and protective features (job resources; Bakker & Demerouti, 2007). Job demands are characteristics of a job that deplete ones mental, physical and emotional resources, for example time pressure or workload, and eventually lead to ill health (Demerouti, Bakker, Nachreiner, & Schaufeli, 2001). Job resources are physical, emotional, social and organisational resources that enable an individual to deal with the demands of their job, for example social support and organisational justice (Demerouti et al., 2001). In more recent research on the JD-R, job resources have been split onto organisational resources and personal resources (Bakker & Demerouti, 2014). The job resources process leads to employee health if it outweighs the demands of the job. This overview of the model shows that it can be applied to any job, and therefore is very useful.

The JD-R proposes two processes: a motivation process and a health-impairment process. The motivation process is where job resources and personal resources lead to work engagement (Bakker & Demerouti, 2014). The health-impairment process is where job demands lead to exhaustion (Bakker & Demerouti, 2014). Studies have supported these two proposed pathways, and evidence shows that the framework can be used to predict organisational outcomes (Bakker & Demerouti, 2014).

More recently, it was proposed that the motivational and ill-health processes, while different, do not act independently of one another, but rather interact. Bakker and Demerouti (2014) propose that these interactions happen in two ways. The first way is that job resources buffer the impact of job demands (Bakker & Demerouti, 2014).

This means that job and personal resources can mediate the negative effects of job demands, creating less exhaustion or burnout. The second way is when job demands are high, which increases the motivational impact of job resources (Bakker & Demerouti, 2014). This means that, when job demands are high, job and personal resources are appreciated more and are more valuable, and as such motivate people more.

The JD-R model is an extremely valuable framework to use, based on its ability to be adapted for practical use. When the JD-R is used, monitoring of the identified job resources and job demands can be done regularly to ensure that problems are identified and measures can be taken to rectify these problems, based on the factors in the JD-R and their relationships (Bakker & Demerouti, 2018). Therefore, the practical application of this framework makes it extremely useful to the industrial psychology practitioner.

This brief overview of the JD-R gives a background understanding of the theory on which the model of CWB and OCB in this study is based. Therefore, the next step is to explore what variables will be placed in this model.

2.6   VARIABLES IN THE MODEL

Past research on both OCB and CWB is often wide in scope and varied in focus. Thus, an extensive examination of the past research on these two variables was required. Based on an exploration of the past research, many variables salient to CWB and OCB were explored.

2.6.1   Counterproductive work behaviour in the Job Demands Resources model

The Job Demands Resources (JD-R) model was originally created as an explanation of the mechanisms of stress and motivation that lead to burnout and engagement respectively (Demerouti et al., 2001). The JD-R is a conceptual frame work that can be used to understand the impact that job demands/stressors and job resources have on employee well-being (Demerouti, 2001, as cited in Sulea et al., 2012). The most popular use of the JD-R has been in explaining the role of job resources and demands in leading to job burnout and job engagement (Bakker & Demerouti, 2007). The JD-R model states that there are two main processes that lead to employee health or ill

health (Bakker & Demerouti, 2007). Job demands create a stress process, while job resources create a motivational process.

The JD-R model is a useful way to understand how job characteristics and personal characteristics affect job performance. It is important to remember that CWB and OCB are a part of the definition of job performance. When using the JD-R to conceptualise CWB, it is defined in terms of an emotional response to stressors (Fox et al., 2001). The stressor-strain relationship is best explained in terms of the JD-R model, which says that every job has job demands that can also be posed as job stressors. The stressor-strain relationship then says that these stressors lead to the strain that is experienced by the person (Fox et al., 2001). This strain can present as emotional, physical or behavioural manifestations, and CWB can be considered a manifestation of strain that is used to deal with the unpleasantness of the stressor (Jex & Beehr, 1991, as cited in Fox et al., 2001). Past research has already posed CWB as part of the JD-R model. Research by Balducci, Schaufeli, and Fraccaroli (2011), using the JD-R model, showed that high job demands were associated with high levels of CWB. Other research has also shown that job demands lead to CWB, with job burnout as a moderator (Smoktunowicz et al., 2015). This shows that past research already posed CWB as an outcome in the stress process in the JD-R model.

It is important to remember that the stressor-strain relationship is mediated by certain variables, for example perception. Research has shown that perception is an important mediator of the stressor-strain relationship (Decker & Borgen, 1993). Therefore, when job demands/stressors are considered, it should be noted that these are perceived demands or stressors.

However, when placing CWB in the JD-R model, it would be remiss to concentrate only on the health impairment process of the model, as the motivation side of the model should not be ignored. In relation to CWB, the motivation half of the model is important to consider, as the JD-R model shows that the two halves of the model are not separate processes, as the demands will moderate the motivation process and the resources will moderate the ill-health process (Bakker & Demerouti, 2014). Therefore, for a full understanding of the causes that lead to CWB and OCB, the motivation process also needs to be examined. The next logical step is to examine what variable will best fit into the JD-R model with CWB under the motivation process. The

purpose of this study was to examine the CWB and OCB aspects of job performance, as job performance is an especial, important construct for organisations. As previously examined, CWB, OCB and task behaviour are all aspects of job performance (Campbell, 1990, as cited in Rotundo & Sackett, 2002). Due to the previously expressed importance of an understanding of job performance, the importance of OCB for organisations due to its benefits, along with the recent interest in research about the CWB-OCB relationship (Dalal, 2005; Miles, Borman, Spector, & Fox, 2002; Spector & Fox, 2002, 2010), it would seem logical to include OCB in the model, as the outcome of the motivational process of the JD-R model.

2.6.2   Organisational citizenship behaviour in the Job Demands Resources model

The JD-R model has a positive motivational process that both influences and is influenced by the ill-health process of the model. For the purpose of this study, OCB is placed as the outcome of the motivational process. The reason OCB is placed in this position is that OCB can be considered the positive aspect of job performance, while CWB can be considered the negative aspect of job performance. As such, it makes logical sense to pose CWB and OCB as the negative and positive processes of the JD-R model.

Previous research has also posed OCB as the outcome of a motivational process. An example of this is the research by Rioux and Penner (2001), which shows that OCB is the result of certain motivations. Other research shows that job satisfaction motivates OCB (Williams & Anderson, 1991). Other job related factors, such as leadership style (Mahembe & Engelbrecht, 2014) or organisational justice (Lim & Loosemore, 2017), motivate individuals to respond with OCB. This previous research shows that OCB is the result of motivation from certain antecedents. Therefore, the placement of OCB as the outcome of the motivational process in the JD-R is acceptable, as it has been proven in previous research that certain antecedents motivate individuals towards acts of OCB. This establishes OCB's place in the JD-R framework that is being used to conceptualise CWB. Now that the relevance of OCB in the model has been explained, the next step is to look at the other variables that have been found to be important in OCB and CWB research.

However, it should be noted that, when examining OCB, it is not only a positive construct with only positive outcomes. Overall, for an organisation, the outcomes are mostly positive, but over-engagement in OCB on an individual level can have negative consequences. It was found that the conscientiousness dimension of OCB was related to higher emotional exhaustion and work-family conflict (Deery, Rayton, Walsh, & Kinnie, 2016). Therefore, OCB should not be pursued in an organisation without ensuring that there is support for employees should they need it. For example, providing flexible time arrangements can help lower work-family conflict.

2.6.3   Emotional demands as a job demand

There are many demands in a job that can lead to strain. However, this investigation focuses on ones that have been or can be linked to CWB. Overall, the main job stressors that have been linked to CWB are control, autonomy (Fox et al., 2001), workplace incivility, interpersonal constraints (Penney & Spector, 2005), organisational injustice (Fox et al., 2001) and job demands (Smoktunowicz et al., 2015). However, as previously discussed, emotions have been shown to have considerable importance when examining OCB and CWB. As such, emotions should be examined for their placement in this model of CWB.

Research by Spector and Fox (2002) shows that positive emotions are related to OCB, while negative emotions are related to CWB. They examined emotions from the standpoint that organisational contexts or factors will cause these emotions, which will then lead to the outcome of OCB or CWB (Spector & Fox, 2002). This study, however, will examine emotions from a different angle, where they are considered from a job demand perspective in the JD-R in the form of emotional demands.

Emotional demands are described as highly emotional interactions at work and feeling rules at work (Heuven, Bakker, Schaufeli, & Huisman, 2006). These types of emotional demands have most often been defined as the antecedents of emotional labour (Xanthopoulou, Bakker, & Fischbach, 2013). This would include emotional interactions with co-workers, supervisors or customers, co-worker misbehaviour, or dealing with difficult customers or supervisors while expected to display patience and helpfulness. Therefore, it is likely that this will be a variable of importance in any service-related jobs, for example nurses, call centre operators and waitpersons, as dealing with disgruntled customers happens often.

Emotional demands are an important construct to study because, through the mechanism of emotional labour, they can lead to negative outcomes for employees. Emotional demands lead to emotional labour, as employees have to emotionally respond to the emotional demands of their job. Emotional demands have been linked to the greater employment of emotional labour strategies (Maxwell & Riley, 2017). The emotional labour strategy of surface acting or faking emotions has an inverse relationship with job satisfaction and well-being (Maxwell & Riley, 2017). This shows that high emotional demands require more emotional labour strategies, which will lead to lower well-being and satisfaction in employees. Thus, emotional demands that are too high can have negative consequences for the organisation and its employees. When investigating emotional demands, other research has also placed emotional demands as a job demand as part of the JD-R model (Peng, 2017). The placement of emotional demands as a job demand in the JD-R by past research adds evidence for whether this study's placement of emotional demands as a job demand in the JD-R is permissible.

2.6.4   Organisational justice as a job resource

Organisational justice has been an important and popular topic in research, as equity in the workplace has become an important social issue and research on justice shows that it has important outcomes, such as job satisfaction, organisational commitment and organisational citizenship behaviour (Cohen-Charash & Spector, 2001). More recent research has linked organisational justice to health outcomes. When controlling for other factors, organisational justice predicts health outcomes (Kivimäki et al., 2004). It was found that, when compared to high procedural justice, low procedural justice was associated with 1.5 times more risk of sickness absence (Kivimäki et al., 2004). Relational justice was also shown to predict for risk of sickness absence (Kivimäki et al., 2004). Adverse changes in justice have also been linked to worse health prospects (Kivimäki, Elovainio, Vahtera, & Ferrie, 2003). This shows that low levels of justice can have a negative effect on employees' health. In this case, organisational justice can have an effect on the well-being of employees, which can influence the cost of sick absenteeism for an organisation because of the level of health of its employees. Organisational justice has also been linked to life satisfaction across four cultures (Lucas, Kamble, Wu, Zhdanova, & Wendorf, 2016). This

suggests that organisational justice is an important construct in an organisation, as its effects are far reaching and influence employees' overall life satisfaction. The cross-cultural aspect of the findings (Lucas et al., 2016) also suggests that organisational justice is a construct that is generalisable across cultures and therefore should receive consideration in different countries and cultures. As such, organisational justice is a research topic of interest.

Organisational justice is an important construct to consider in a model including both OCB and CWB, because it is positively and negatively linked to OCB and CWB respectively (Badawy & El-Fekey, 2017). When organisational justice has been examined in relation to CWB, it has been incorporated as part of a cognitive framework of CWB, where CWB is a reaction to injustice. More recent research has also shown that organisational justice has a negative relationship with some negative behaviours that can also be considered CWB behaviours. For example, mobbing behaviour, which includes the isolation, attack on personality or work status and negative behaviour directed at a person at work (Terzioglu, Temel, & Uslu Sahan, 2016), can be included in the broad definition of CWB, and thus considered a type of CWB. This mobbing behaviour has been found to have a negative relationship with organisational justice (Terzioglu et al., 2016) and this therefore indicates that organisational justice is negatively related to CWB. Therefore, organisational justice is an important construct to explore.

Organisational justice is an important topic and has been used as part of a main framework for explaining CWB and OCB, as discussed previously. Organisational justice also has a very important role in the South African context due to the high level of inequality in the South African society (Lehohla, 2017). In 2015, South Africa had a Gini coefficient of .67 for income per capita and 0.64 for expenditure per capita (Lehohla, 2017). The Gini coefficient ranges from 0 (no inequality) to 1 (complete inequality). South Africa's Gini coefficient shows that there is a large amount of income inequality in South Africa, and therefore the conclusion is drawn that organisational injustice may have particular importance in South Africa due to its high level of distributive injustice. These contextual factors make an investigation into the relationship between organisational justice, OCB and CWB paramount, as there are likely to be high levels of organisational injustice in many South African

organisations. Therefore, it is important to include organisational justice in a model explaining CWB and OCB.

In past research, organisational justice has been framed as a job demand as well as a cause for CWB through retaliation and anger (Fox et al., 2001). Research has also been done to investigate whether organisational justice can be considered a job demand or stressor, and the results of the study showed that indeed it can (Fox et al., 2001). However, in this model, organisational justice is framed as a job resource rather than a demand, and its relationship to CWB is expressed in an interaction affect rather than a direct relationship. The reason organisational justice is a job resource is that, according to Bakker and Demerouti (2014), a job demand costs effort while a resource fills a psychological need. In the case of organisational justice, this would be the need for fairness and equality. OCB research has also shown that perceptions of high organisational justice in an organisation motivate individuals to participate in OCB (Konovsky & Pugh, 1994; Organ, 1988, as cited in LePine et al., 2002). Therefore, there is past evidence that organisational justice can be placed in a direct motivational relationship with OCB.

The placement and importance of organisational justice has been argued, and therefore an investigation into the construct 'organizational justice' also had to be done. Broad speaking, organisational justice can be defined as fairness in the organisation. It has been divided into three domains, namely distributive, procedural and interactional justice.

2.6.4.1   *Distributive justice*

Distributive justice is defined as the equitable distribution of outputs or rewards/pay (Adams, 1963). Distributive justice is important to organisations, as it is linked to organisational outcomes like pay, rewards, bonuses, etc. Distributive justice is also important because it has been linked to emotional, cognitive and behavioural outcomes (Cohen-Charash & Spector, 2001). Therefore, this shows that distributive justice can have important outcomes and, as such, should not be ignored. The need for distributive justice is argued from Adams' (1963) equity theory. Equity theory says that individuals rate the ratio of their input (what they put in at work, for example effort and time) to their output (what they get back at work, for example rewards or

recognition) compared to a referent other, and when the ratio is not balanced the individual takes action to reinstate equilibrium (Adams, 1963).

2.6.4.2 *Procedural justice*

Procedural justice is defined as the fairness and consistency of the procedures used to allocate outputs (Lind & Tyler, 1988, as cited in Cohen-Charash & Spector, 2001). For a procedure to be fair in an organisation, it needs to be applied consistently, the information used needs to be accurate, it must be unbiased, there has to be room for appeal, and all employees' needs and values have to be taken into account (Leventhal, 1980, as cited in Cohen-Charash & Spector, 2001). Past research has shown that procedural justice has emotional, cognitive and behavioural consequences; however, unlike distributive justice, the outcomes are much more organisationally focused (Cohen-Charash & Spector, 2001). Research has also found that there is a link between procedural justice and OCB. A study by Moorman (1991) showed that procedural justice could be used to predict OCB.

2.6.4.3 *Interactional justice*

Interactional justice is justice that is perceived by the employee in dealings with the management or leadership of the organisation. Due to this justice being dependent on an employee-manager relationship, interactional justice relates to communication and interpersonal fairness (Tyler & Bies, 1990, as cited in Cohen-Charash & Spector, 2001). These two aspects have been termed informational and interpersonal justice (Bies & Moag, 1986, as cited in Colquitt, Conlon, Wesson, Porter, & Ng, 2001). This means that the way managers or leaders treat employees is important, as well as the information that is communicated to employees by managers.

2.6.5 The dark triad as a personal resource

When considering personal resources as part of job resources, an important construct is that of personality. Past research has found that conscientiousness as part of the FFM is the best predictor of CWB, and agreeableness, extraversion and emotional stability have also all been linked to CWB (Bolton et al., 2010; Salgado, 2002). The HEXACO model of personality has also been linked to CWB. However, these personality traits are very broad and general. While they are useful, a more specific

understanding of personality may help in understanding CWB and OCB more fully. Therefore, it may be more useful to examine specific personality types, rather than general traits. The personality types that will be included in this model are those characterised as the dark triad. The dark triad is a relatively new personality research topic and consists of three specific personality types, which are Machiavellianism, narcissism and subclinical psychopathy (Paulhus & Williams, 2002). The reason the dark triad is included in this model is due to its many links to CWB. The dark triad is relatively new to research, but already studies have proven that it is a significant predictor of CWB (Palmer et al., 2017). However, there has been little specification of how this relationship works. It is hypothesised that the dark triad influences CWB through a moderation effect, in that it predisposes individuals to respond with CWB when experiencing stress from a job demand. However, this will be dealt with in more detail in the interaction effects section of this research.

A personal resource is defined as a positive self-evaluation that is linked to an individual's belief that he/she has the ability to control and affect his/her environment (Bakker & Demerouti, 2014). While not the typical understanding of a personal resource such as self-efficacy or optimism, the dark triad can still be understood as a personal resource, as a trait of all these personalities has to do with high personal regard. An example of this is narcissism's grandiose sense of self. Therefore, these aspects of personality can be considered personal resources, as they influence how individuals deal with job demands and are characterised by inflated sense of self or selfishness.

In terms of the JD-R framework, there is no better place to 'fit' the dark triad into the model, as it is most closely linked to the understanding of personal resources. A personality trait is neither a job demand nor a job resource, therefore, while not the traditional understanding of a personal resource, it is the best fit for the construct in terms of the JD-R theoretical framework.

Paulhus and Williams (2002) named the three personality types of the dark triad narcissism personality trait, Machiavellianism personality trait and sub-clinical psychopathy. These three personality types have gained attention due to their relationship with misbehaviour in organisations. The dark triad has been linked to low job performance, as well as to CWB (Forsyth, Banks, & McDaniel, 2012; Palmer et

al., 2017), and other research has shown that the dark triad personality traits are linked to exploitative interpersonal behaviour (Jones & Paulhus, 2017). Recent research has also shown that personality, and more specifically the dark triad, is responsible for more 'sinning' behaviour than one's level of morality (Jonason, Zeigler-Hill, & Okan, 2017). This indicates that personality may be more important than morals when considering 'bad' behaviour. Along with its links to CWB and other negative behaviours, this makes the dark triad a construct of high interest when considering a model of OCB and CWB. The dark triad is made up of three distinct personality types. Each of these types – narcissism, Machiavellianism and psychopathy – will be examined in more detail.

2.6.5.1   *Narcissism personality trait*

Narcissism is a personality trait that is characterised by extremely high levels of self-esteem that are not based on objective reality (Penney & Spector, 2002). This distinction is important, as it allows a differentiation between those with high self-esteem and those with a narcissism. Narcissism is also characterised by individuals seeing themselves as superior to others, and often attempting to display their dominance or superiority (Penney & Spector, 2002). Narcissism has also been linked to CWB in past research. A meta-analytic study showed that narcissism is positively related to CWB (Forsyth et al., 2012). Other research has linked narcissism to negative behaviours such as cheating when the risks of punishment are low, and a self-deceptive bias (Jones & Paulhus, 2017). This shows that having high levels of narcissism can lead to negative behaviours. Therefore, this is a construct of high interest when examining the negative behaviours of CWB.

2.6.5.2   *Machiavellianism personality trait*

Individuals with Machiavellianism (high Mach) as a personality type are characterised by three things: they manipulate people to get their way, they believe that all people are 'bad', and they think the end justifies the means (O'Boyle, Forsyth, Banks, & McDaniel, 2012). This means that high-Mach individuals often make unethical decisions in the pursuit of their goals (Kish-Gephart, Harrison, & Treviño, 2010). Research also shows that those with high levels of the Machiavellianism personality trait use manipulative behaviour to undermine others (Jonason, Slomski, & Partyka,

2012). A meta-analytic study has also shown that Machiavellianism is linked to lower levels of job performance and high levels of CWB (Forsyth et al., 2012). More recent research shows that high levels of Machiavellianism predict cheating when the risks are high or low, and require an intentional lie (Jones & Paulhus, 2017). This predisposition towards CWB and other negative behaviours makes Machiavellianism a construct of interest when examining a model of CWB and OCB.

2.6.5.3   *Psychopathy personality trait*

It should be noted that the psychopathy personality trait is sub-clinical. Individuals with this personality trait are characterised by a lack of concern for other people and social conventions, impulsivity, charisma as well as a lack of guilt when they have perpetrated wrongdoing (O'Boyle et al., 2012). Research by Cooke and Michie (2001) characterises the psychopathy personality into three main domains, namely 1) deceitful and arrogant style in dealing with others, 2) inexperience of guilt, and 3) impulsivity and recklessness. Again, the research does not agree on a single definition, and psychopathy has other definitions. Psychopathy has also been defined as being comprised of two main domains: fearless dominance, characterized by fearlessness, and self-centred impulsivity, characterised by impulsivity, irresponsibility and a lack of control (Lykken, 1995, as cited in Blickle & Schütte, 2017). Research has shown that this self-centred impulsivity dimension is positively linked to CWB (Blickle & Schütte, 2017). Psychopathy is related to a decrease in job performance and an increase in CWB (Forsyth et al., 2012). Psychopathy also predicts cheating, even when there is a serious risk of punishment or it requires an intentional lie (Jones & Paulhus, 2017). Therefore, these links to both CWB and other maladaptive behaviours highlight psychopathy as a construct of importance when examining a model of CWB and OCB.

2.7   RELATIONSHIPS AMONG THE VARIABLES

The variables in the model have been explained in terms of what is understood in the literature about the constructs themselves. However, none of the relationships among the variables have yet been explored. It is important to remember that the model is based on the JD-R framework and, as such, the pattern of the direct and interaction effects follows those laid out in the theoretical framework.

2.7.1   Organisational citizenship behaviour and counterproductive work behaviour

When examining OCB and CWB, it is important to consider the relationships between the two. Previously, CWB and OCB were conceptualised as two opposing behaviours that are polar opposites on either end of a single scale. Therefore, if a person committed an act of OCB, they would not commit CWB. More recent research has proven that this is an incorrect understanding of CWB and OCB, and that they are not opposites, but two different forms of behaviour that can manifest in the same person.

Recent research has proven that OCB and CWB are in fact separate variables, rather than opposite ends of a single variable (Dalal, 2005). However, research has also shown that, while these variables are separate, they can also be related (Dalal, 2005). Therefore, it is important to investigate if there is a relationship between these variables as posed in this model.

Most research, as well as meta-analytic data exploring the relationship between OCB and CWB, has found a significant negative relationship between the variables (Ariani, 2013; Dalal, 2005) This means that, as CWB increases, OCB decreases, or, as OCB increases, CWB decreases. Spector and Fox (2010), however, propose a new theoretical model with regard to this relationship. In terms of this model, CWB can lead to OCB and OCB can lead to CWB. There are different mechanisms underlying these relationships. It is suggested that, when an individual who performs OCB due to organisational constraints, co-worker underperformance or OCB is not rewarded as expected, this leads to anger, which leads to CWB (Spector & Fox, 2010). Recent research has found evidence of this claim, where it was shown that organisation-elicited OCB was related to CWB, while discretionary OCB was not (Spanouli & Hofmans, 2016). On the other side of the reaction, CWB can lead to OCB due to guilt (Spector & Fox, 2010). These proposed relationships go against most past research. However, if true, they could make important contributions to the understanding of OCB and CWB and how they interact. Therefore, it is important to test these suppositions and investigate whether OCB and CWB can lead to each other in this comprehensive model of CWB. This leads to the first two hypotheses:

Hypothesis 1: OCB has a significant positive effect on CWB.

Hypothesis 2: CWB has a significant positive effect on OCB.

Because research has shown that OCB and CWB are separate constructs, there is a possibility that both could occur in the same person (Dalal, 2005). OCB and CWB occur due to personal, situational or organisational factors and, due to the fact that some of these factors are short term and variable, this can lead to a person responding with OCB one day and with CWB the next (Hafidz, Hoesni, & Fatimah, 2012). An example of this could be emotions. If someone is experiencing positive emotions one day, they will be more likely to engage in OCB; however, if they are experiencing negative emotions the next day they will be more likely to engage in CWB (Spector & Fox, 2002). As previously mentioned, emotions have played a big role in the investigation into CWB and OCB and, as such, is an important variable that needs to be considered.

2.7.2   Emotional demands and counterproductive work behaviour

Most research on emotional demands has focused on employee well-being and burnout. Studies based on emotional demands have proven that emotional job demands are related to burnout as well as to decreased well-being (Le Blanc, Bakker, Peeters, Van Heesch, & Schaufeli, 2000). Research has also shown that emotional demands cause work-related stress and strain (Pugliesi, 1999). Therefore, this demonstrates that emotional demands can be placed as a job demand, as previous research has shown that emotional demands create stress and emotional demands cause a process of ill health that leads to burnout. This shows that emotional demands will cause stress and individuals could respond with stain-based CWB.

Little research has been done to investigate the link between emotional demands as a construct and CWB. However, research has demonstrated that conflict with co-workers and supervisors leads to CWB (Miles et al., 2002). Conflict with co-workers or supervisors can be classified as an emotional demand, as it can be considered emotionally charged interactions. Research on emotional labour has also proven that feeling rules are related to CWB, and that surface acting (expressing an emotion different to the one felt to conform to feeling rules) causes CWB (Bechtoldt, Welk, Hartig, & Zapf, 2007).

Research on socio-emotional demands shows that these demands have to be dealt with by the person who is experiencing them, which is a labour, and when this exceeds the resources available to the person it leads to stress (Lings, Durden, Lee, & Cadogan,

2014). Stress can lead to CWB and, as previously discussed, CWB can be a strain-based response to stress. Therefore, emotional demands can cause the stress that results in a CWB reaction.

The relationship between emotional demands and CWB can also be examined by looking at the other relationships these demands have with the linked variables. Emotional demands predict the use of emotional labour strategies, and thus emotional labour (Maxwell & Riley, 2017). Emotional labour has been linked to emotional exhaustion (Tepeci & Pala, 2016), and this has been linked to CWB (Ugwu, Enwereuzor, Fimber, & Ugwu, 2017). While this involves a rather complicated chain of causal events, based on the evidence provided here it is logical to hypothesise that emotional demands could cause CWB.

Despite the lack of direct evidence of a relationship between emotional demands and CWB, due to the links in the JD-R model between job demands and their outcome, it is theoretically expected that there will be a relationship. This, and the previous research discussed, provide evidence for the claim that emotional demands will lead to CWB.

Hypothesis 3: Emotional demands have a significant positive effect on CWB.

2.7.3   Organisational justice and organisational citizenship behaviour

Previous research has shown that OCB is related to satisfaction (Smith et al., 1983), and it is thought that this is how the organisational justice-OCB relationship works. Research has proven that organisational justice is positively related to satisfaction (Colquitt et al., 2001), and that satisfaction is related to OCB. Therefore, this leads to the conclusion that organisational justice can predict OCB. This conclusion has also been reached in other research (Moorman, 1991). Previous research by Moorman (1991) shows that all three types of organisational justice are related to OCB. Other, more recent studies, have also mirrored these results and have provided evidence that organisational justice is in a positive relationship with OCB (Demirkiran, Taskaya, & Dinc, 2016; Nicokar, Nowkarizi, & Sharif, 2016). Justice perceptions have also been linked to OCB (Chan & Lai, 2017). In the context of Chan and Lai's (2017) research, communication satisfaction was related to justice perceptions, which were then related to OCB. This points to the importance of interactional justice through good

communication to ensure that OCB is present in an organisation. This examination of past research on the relationship between these two constructs leads to the hypothesis that organisational justice is related to OCB.

Hypothesis 4: Organisational justice has a significant positive effect on OCB.

2.7.4   The dark triad and organisational citizenship behaviour

The dark triad is not a single construct, but rather the name given to three personality constructs. Therefore, the relationships is explored for the three constructs separately, rather than as one 'dark triad' construct.

2.7.4.1   *Narcissism and organisational citizenship behaviour*

Previous research on the relationship between narcissism and OCB shows that there is a negative relationship between the variables. Research shows that those with high levels of narcissism have lower task performance, as well as engaged less in helping behaviours (Smith, Wallace, & Jordan, 2016). This shows that those with high levels of narcissism are less likely to engage in OCB than those with lower levels of narcissism. It is possible that their grandiose sense of superiority will prevent those with high narcissism personality trait from engaging in OCB, as they will consider it 'beneath them'. Therefore, this leads to the conclusion that high levels of narcissism will predict low levels of OCB.

Hypothesis 5: The narcissism personality trait has a significant negative effect on OCB.

2.7.4.2   *Machiavellianism and organisational citizenship behaviour*

Machiavellian individuals (high Machs) have been associated with OCB, and research has shown that a person with high Mach will likely engage in OCB (Becker & O'Hair, 2014). The motivation for this OCB behaviour is impression management. Other research found that OCB can be motivated by pro-social values, concern for the organisation and impression management (Rioux & Penner, 2001). Due to high Machs' manipulative nature, they will engage in OCB to manage their impression in the organisation (Becker & O'Hair, 2014). This leads to the conclusion that having a Machiavellianism personality trait is in a positive relationship with OCB.

Hypothesis 6: Machiavellianism personality trait has a significant positive effect on OCB.

2.7.4.3   *Psychopathy and organisational citizenship behaviour*

Previous research on the relationship between psychopathy personality and OCB shows that there is a negative relationship between the variables. Research shows that those with high levels of psychopathy personality trait have lower job performance and engage less in helping behaviours (Smith et al., 2016). This shows that those with high levels of psychopathy personality trait are less likely to engage in OCB than those with lower levels. Selfishness, along with a disregard for others, is likely to prevent individuals with high psychopathy personality trait from engaging in OCB. This leads to the conclusion that high levels of psychopathy personality trait will lead to low levels of OCB.

Hypothesis 7: Psychopathy personality trait has a significant negative effect on OCB.

2.7.5   **Interaction effects**

The latest JD-R model takes into account that the health deterioration process and the motivation process are not separate, unrelated process, but rather have an interaction effect on each other. Resources have an interaction effect on the relationship between the demands and their outcome, and the demands have an interaction effect on the resources-outcome relationship (Bakker & Demerouti, 2014). In the case of this model, it will mean that resources will have a moderating effect on the demand-CWB relationship, and demands will have moderating effect on the resources-OCB relationship.

2.7.5.1   *The moderating effect of emotional demands*

Emotional demands can be considered a job demand that can lead to ill health and ultimately result in CWB. However, more recent research on the JD-R demonstrates that it is also important to consider the moderating role that job demands will have on the resources-OCB relationship. Past research has investigated the emotional demands-OCB relationship and discovered that emotional demands and OCB are negatively related (Chang, Johnson, & Yang, 2007). This leads to the conclusion that emotional demands can moderate the relationship between resources and OCB.

From this negative relationship it can be extrapolated that high levels of emotional demands will negatively affect the relationship between organisational justice and OCB. In this case, high levels of emotional demands may make employees less likely to engage in organisational citizenship behaviour, despite high levels of organisational justice. Therefore, it is hypothesised that emotional demands will moderate the relationship between organisational justice and OCB.

Hypothesis 8: Emotional demands have a significant negative moderator effect on the relationship between organisational justice and OCB.

Emotional demands will also moderate the relationship between personal resources and OCB, in this case the relationship between the dark triad and OCB. Again, the dark triad is not a single construct, but rather an umbrella term for three separate constructs. Therefore, the moderation effects of emotional demands need to be considered for each separate variable.

Research has shown that those with high levels of narcissism engage less in helping behaviours (Smith et al., 2016). This, coupled with the negative relationship between emotional demands and OCB, leads to the conclusion that emotional demands will moderate the relationship between narcissism personality trait and OCB. One way in which this moderation relationship could manifest is that those with high levels of narcissism personality trait are less likely to engage in OCB when they are experiencing strain caused by emotional demands than those who are not experiencing high levels of emotional demands.

Hypothesis 9: Emotional demands have a significant positive moderator effect on the relationship between narcissism personality trait and OCB.

Those with a high Machiavellianism personality trait have been positively linked to OCB (Becker & O'Hair, 2014) and, as previously discussed, this link is due to the impression-management behaviours of these individuals. However, the negative relationship of emotional demands with OCB may mean that, when emotional demands are high, those with a high Machiavellianism personality trait could be less likely to use OCB as impression-management behaviour.

Hypothesis 10: Emotional demands have a significant, positive moderator effect on the relationship between Machiavellianism personality trait and OCB.

Those with high psychopathy personality trait have been linked to less helping behaviours (Smith et al., 2016). There is also a negative relationship between emotional demands and OCB (Chang et al., 2007). These two main effects between the variables and OCB lead to the extrapolation that emotional demands will also have a moderating effect on the direct relationship between psychopathy personality type and OCB. The nature of the JD-R also supports this, as job demands have a moderating effect on the resources-based health process.

Hypothesis 11: Emotional demands have a significant positive moderator effect on the relationship between psychopathy personality trait and OCB.

2.7.5.2   *The moderating effect of organisational justice*

The topic of organisational justice has been researched to a great extent in the vein of CWB antecedent research. Organisational justice is an important factor in predicting CWB, and all three types of justice have been linked to CWB in previous research.

In terms of distributive justice, research by Greenberg (1990) has shown that theft rates go up when pay is reduced or cut. This study is a perfect example of distributive injustice leading to CWB, because when the employees' pay was cut, which can be considered distributive injustice, it led to theft, which is a type of CWB. This study presents evidence that distributive justice has an important influence on CWB. It can logically be assumed that, when distributive justice is low, it moderates the relationship between emotional demands and CWB by increasing the amount of CWB. Previous research has shown that procedural as well as distributive and interactional justice are all related to CWB negatively, and when there are low levels of these three types of justice, there are high levels of CWB (Fox et al., 2001).

Interactional justice is important, as research has been done that proves that interactional justice is related to CWB and, in fact, at times has been proven to have the greatest impact on CWB of the types of justice (Le Roy, Bastounis, & Minibas-Poussard, 2012; Skarlicki & Folger, 1997). This study demonstrates the importance of interactional justice when considering CWB, as well as its relative importance to the other types of justice.

Past research has demonstrated that organisational justice has a negative relationship with CWB, as low justice predicted high CWB and high justice predicted low CWB

(Fox et al., 2001). This evidence leads to the conclusion that it is very likely that organisational justice will moderate the relationship between emotional demands and CWB. For example, if emotional demands are low, there might still be high CWB due to low organisational justice. As the relationship between organisational justice and CWB has previously been proven, this is a plausible example.

Hypothesis 12: Organisational justice has a significant negative moderator effect on the relationship between emotional demands and CWB.

2.7.5.3   *The moderating effect of the dark triad*

In the health-impairment process of the JD-R, the resultant ill health is due to a stress process (Demerouti et al., 2001), and CWB is the strain-based response to that stress. However, CWB is only one example of a manifestation of strain. Strain can manifest in other ways, as people cope with stain differently (Jex & Beehr, 1991, as cited in Fox et al., 2001). Strain can manifest in cognitive, physical or behavioural ways other than CWB (Jex & Beehr, 1991, as cited in Fox et al., 2001). This means that there will be certain individual factors that will make it more likely for individuals to respond to or cope with CWB. One of these important factors is personality, and in the case of this model, the dark triad personality traits.

Past research has investigated the link between the dark triad and CWB, and it has shown that all three personality types explain variance in CWB (O'Boyle et al., 2012). Therefore, it can be concluded that the dark triad comprises important individual factors to consider when examining individual factors that will moderate the relationship between perceived job stressors and CWB. Research has also shown that personality moderates the relationship between job stressors and CWB (Greenidge & Coyne, 2014). In this research, the personality factors that were examined were not the components of the dark triad. However, this research gives an indication that personality affects how someone evaluates and deals with a job stressor, which means that certain personality traits can lead to a more negative evaluation, and hence more negative emotions that lead to CWB (Greenidge & Coyne, 2014). Therefore, this shows that it is possible that the dark triad personality traits could moderate the relationship between emotional demands and CWB, as they will affect how the stressor is evaluated and responded to.

Due to their grandiose sense of self, narcissists are vulnerable to ego-threatening information or situations (Penney & Spector, 2002). When their ego is threatened, they will respond and, due to the high level of aggression associated with high narcissism personality trait individuals (Bushman & Baumeister, 1998), this response is often in the form of CWB (Penney & Spector, 2002). Job demands such as emotional demands can lead to an ego-threatening situation for narcissists. Job demands can be a threat to the ego of a narcissist and, as such, they will respond with CWB. This leads to the conclusion that having a high narcissism personality trait will predispose an individual to respond to stressful situations with CWB. Alternatively, recent research has shown that narcissism is predicted by low emotional stability (Egan, Chan &, Shorter, 2014). This means that, in a situation where there are emotional demands, narcissists may be less able to deal with the situation constructively due to their low emotional stability, and as such respond with CWB. A person with high narcissism therefore is more likely to respond to a job demand with CWB, and this shows that narcissism will moderate the demand-CWB relationship.

Hypothesis 13: Narcissism personality trait has a significant positive moderator effect on the relationship between emotional demands and CWB.

A study by Kish-Gephart and colleagues (2010) shows that Machiavellianism is significantly related to unethical intentions and behaviours. This is not to say that unethical decisions and CWB are synonymous, but rather that high-Mach individuals are more likely to engage in CWB if it will help them achieve their ends, even if the act is unethical. A hypothetical example of this could be that, if emotional demands are causing stress in an organisation, and this is restricting a high-Mach person's ability to perform, he or she might sabotage a co-worker to draw the leaders' attention away from them and lessen their own emotional demands. This demonstrates that being a high-Mach individual can predispose a person to responding to job demands with CWB. This conclusion leads to the next hypothesis:

Hypothesis 14: A Machiavellian personality trait has a significant positive moderator effect on the relationship between emotional demands and CWB.

Previous research on the topic of psychopathy personality trait has demonstrated its link to CWB (O'Boyle et al., 2012). This means that, in a situation where the individual is experiencing job strain in the form of emotional demands, those with a

high psychopathy personality trait may be predisposed to respond with CWB due to their impulsivity and lack of concern for others.

Hypothesis 15: Psychopathy personality trait has a significant positive moderator effect on the relationship between emotional demands and CWB.

2.8   A CONCEPTUAL MODEL

The hypotheses above have been combined into a conceptual model that is depicted in Figure 2.1. Figure 2.1. represents the latent variables, their main relationships and their moderating relationships.
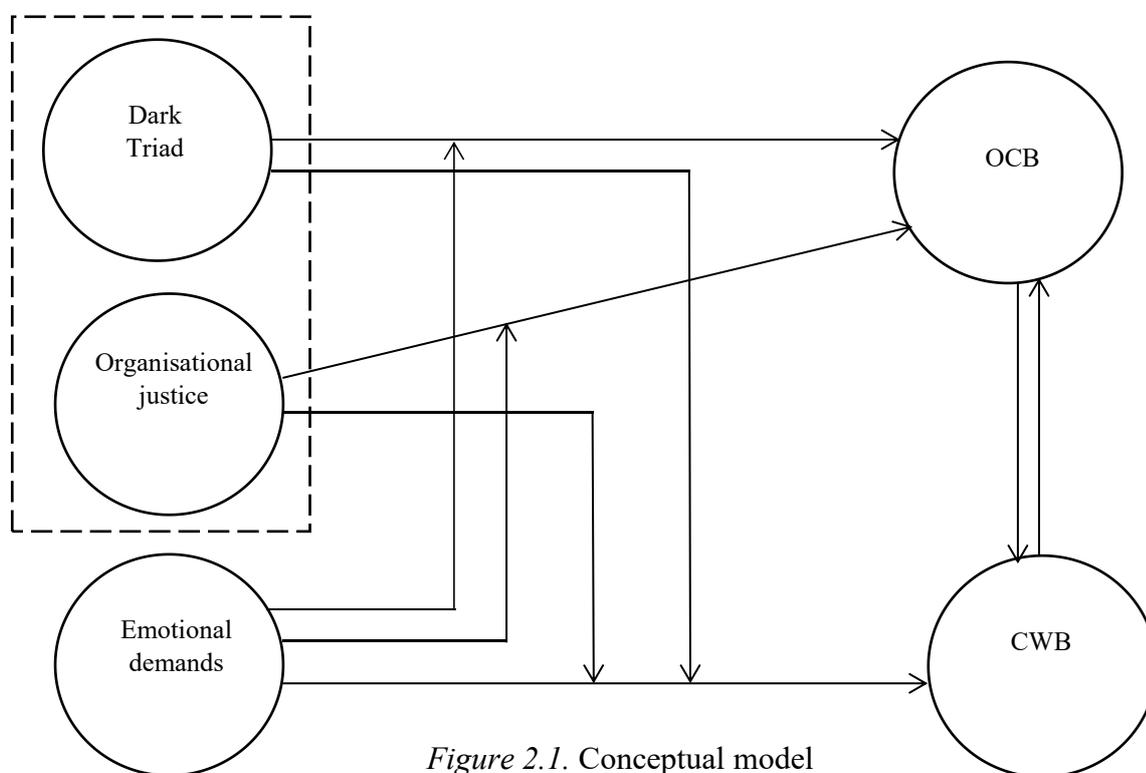
Figure 2.1. Conceptual model

2.9   CHAPTER SUMMARY

This chapter began with general definitions of CWB and OCB as detailed in the relevant literature. The theoretical framework that was used for this study, namely the job demands and resources model (J-DR), was also explored, and CWB and OCB were placed in this framework. An in-depth literature review of the antecedent variables for OCB and CWB was conducted, along with an exploration of the main and moderating relationships among the variables. The hypotheses were stated based

on the exploration of the literature on these variables, and a theoretical model was created based on these hypothesised relationships.

The next chapter presents the methodology used to conduct the research and to test the previously mentioned hypotheses.

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CHAPTER 3

RESEARCH DESIGN AND METHODOLOGY

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3.1   INTRODUCTION

The conclusion of the literature review was a conceptual model that represents CWB and OCB in the JD-R model, along with their hypothesised antecedents. Therefore, the next step in the research process was to test the model and the hypotheses that make up that model. The purpose of this chapter is to detail the research methodology used throughout the research process to gain information to answer the research-initiating question. The research methodology includes a depiction of the structural model, the statistical hypotheses, the research design, the sampling method, data collection, the measurement instruments that were used and the statistical analysis of the data.

The validity of the explanations and results derived from this inquiry into the proposed model is based on the reliability and validity of the research methods used. Therefore, it is important to focus on error reduction throughout the research process and, as such, the research methods were planned carefully to pursue this aim.

3.2   SUBSTANTIVE RESEARCH HYPOTHESES

The positivistic scientific approach to research argues that hypotheses have to be tested empirically. Thus, what the researcher suggests as possible explanations for phenomena need to be tested against objective reality, and their plausibility must be evaluated. Therefore, before a researcher's possible explanations can be tested, it has to be known what these explanations are. Thus, the formulation of these explanations as formal hypotheses is an important part of the research process. Based on the theorising in Chapter 2, substantive hypotheses were formulated. These substantive hypotheses are listed below.

Hypothesis 1: OCB (η_1) has a significant positive effect on CWB (η_2).

Hypothesis 2: CWB (η_2) has a significant positive effect on OCB (η_1).

Hypothesis 3: Emotional demands (ξ_5) have a significant positive effect on CWB (η_2).

Hypothesis 4: Organisational justice (ξ_1) has a significant positive effect on OCB (η_1).

Hypothesis 5: Narcissism (ξ_3) personality trait has a significant negative effect on OCB (η_1).

Hypothesis 6: Machiavellianism (ξ_2) personality trait has a significant positive effect on OCB (η_1).

Hypothesis 7: Psychopathy (ξ_4) personality trait has a significant negative effect on OCB (η_1).

Hypothesis 8: Emotional demands (ξ_5) have a significant negative moderator effect on the relationship between organisational justice (ξ_1) and OCB (η_1).

Hypothesis 9: Emotional demands (ξ_5) have a significant positive moderator effect on the relationship between narcissism (ξ_3) personality trait and OCB (η_1).

Hypothesis 10: Emotional demands (ξ_5) have a significant positive moderator effect on the relationship between Machiavellianism (ξ_2) personality trait and OCB(η_1).

Hypothesis 11: Emotional demands (ξ_5) have a significant positive moderator effect on the relationship between psychopathy (ξ_4) personality trait and OCB(η_1).

Hypothesis 12: Organisational justice (ξ_1) has a significant negative moderator effect on the relationship between emotional demands (ξ_5) and CWB (η_2).

Hypothesis 13: Narcissism (ξ_3) personality trait has a significant positive moderator effect on the relationship between emotional demands (ξ_5) and CWB (η_2).

Hypothesis 14: Machiavellianism (ξ_2) personality trait has a significant positive moderator effect on the relationship between emotional demands (ξ_5) and CWB (η_2).

Hypothesis 15: Psychopathy (ξ_4) personality trait has a significant positive moderator effect on the relationship between emotional demands (ξ_5) and CWB (η_2).

3.3   THE STRUCTURAL MODEL

The theorizing aspect of this research culminated in a conceptual model, although a conceptual model cannot be tested empirically as it is. Rather, it has to be translated

into a structural model based on the hypotheses suggested by the researcher. This model can then be tested empirically to compare the suggested reasoning to that of the objective reality. The conceptual model (Figure 2.1) and the structural model (Figure 3.1) are quite different, as the structural model includes all the hypothesised relationships that appear as dummy variables in the case of moderating relationships (indicated by '*' in Table 3.1). The interaction effects are changed into their own dummy variables for ease of statistical hypothesis testing. Table 3.1 provides a summary of the latent variables, as well as the dummy variables that are included in Figure 3.1.
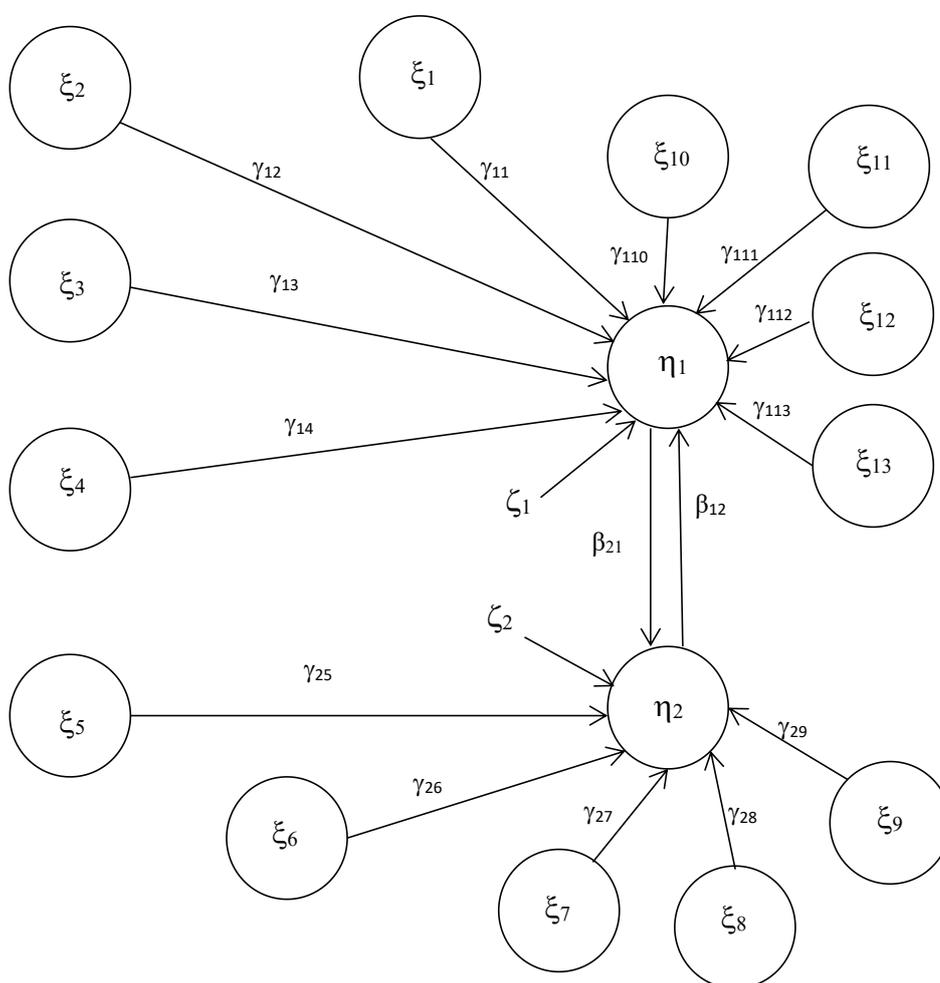
Figure 3.1. Structural model

Table 3.1

Summary of Latent Variables

ξ_1	Organisational justice
ξ_2	Machiavellianism
ξ_3	Narcissism
ξ_4	Psychopathy
ξ_5	Emotional demands
ξ_6	Emotional demands*Organisational justice
ξ_7	Mach*Emotional demands
ξ_8	Narcissism*Emotional demands
ξ_9	Psychopathy*Emotional demands
ξ_{10}	Organisational justice*Emotional demands
ξ_{11}	Emotional demands*Narcissism
ξ_{12}	Emotional demands*Mach
ξ_{13}	Emotional demands*Psychopathy
η_1	OCB
η_2	CWB

3.4   STATISTICAL HYPOTHESES

The statistical hypotheses presented here are derived from the substantive hypotheses and show the logic that underlies the structural model, the research design and the statistical analysis. These statistical hypotheses were formulated with reference to the structural model.

Hypothesis 1
H_{01}: $\beta_{21} = 0$
H_{a1}: $\beta_{21} > 0$

Hypothesis 2
H_{02}: $\beta_{12} = 0$
H_{a2}: $\beta_{12} > 0$

Hypothesis 3
H_{03}: $\gamma_{25} = 0$
H_{a3}: $\gamma_{25} > 0$

Hypothesis 4

H_{04}: $\gamma_{11} = 0$

H_{a4}: $\gamma_{11} > 0$

Hypothesis 5

H_{05}: $\gamma_{13} = 0$

H_{a5}: $\gamma_{13} < 0$

Hypothesis 6

H_{06}: $\gamma_{12} = 0$

H_{a6}: $\gamma_{12} > 0$

Hypothesis 7

H_{07}: $\gamma_{14} = 0$

H_{a7}: $\gamma_{14} < 0$

Hypothesis 8

H_{08}: $\gamma_{110} = 0$

H_{a8}: $\gamma_{110} < 0$

Hypothesis 9

H_{09}: $\gamma_{111} = 0$

H_{a9}: $\gamma_{111} > 0$

Hypothesis 10

H_{010}: $\gamma_{112} = 0$

H_{a10}: $\gamma_{112} > 0$

Hypothesis 11

H_{011}: $\gamma_{113} = 0$

H_{a11}: $\gamma_{113} > 0$

Hypothesis 12

H_{012}: $\gamma_{26} = 0$

H_{a12}: $\gamma_{26} < 0$

Hypothesis 13

H_{013}: $\gamma_{28} = 0$

H_{a13}: $\gamma_{28} > 0$

Hypothesis 14

H_{014}: $\gamma_{27} = 0$

H_{a14}: $\gamma_{27} > 0$

Hypothesis 15

H_{015}: $\gamma_{29} = 0$

H_{a15}: $\gamma_{29} > 0$

3.5   RESEARCH DESIGN

The overall research method was a quantitative one. This method was used as the nature of the investigation into CWB allowed for this approach, as quantitative research is used to test hypotheses on the relationships between variables (Struwig & Stead, 2001). The research design that was implemented is one that falls under the category of quantitative research.

The epistemic ideal in research is to find as close as possible the 'truth' (Babbie & Mouton, 2001). In other words; the results that the research produces needs to be valid and reliable. This is achieved by controlling random error via standardization and item analysis (Babbie & Mouton, 2001). Using a research design is one way in which the research process is standardised and random error can be controlled.

The particular research design that was used for this study was a non-experimental *ex post facto* correlational design. This research design is used when the relationships among the latent variables can be observed but not manipulated (Theron, 2014). This design was used in this research as the researcher was not able to manipulate the variables, but rather only observe their relationships. Therefore, the advantage of using a correlational design was that it could be used to examine research questions that cannot be examined using experimental methods. Another advantage is that it makes it possible for the researcher to examine the strength of the relationships among the variables. The disadvantage, however, is that it does not examine causation in the relationship.

Ex post facto correlational design is a research technique that is used to assess whether a structural model and its portrayed psychological processes are permissible given the data/results found in the sample. The aim of this research was to discover how much of the variance in CWB and OCB could be explained by the other variables in their hypothesised relationships. *Ex post facto* correlational design allows the researcher to discover if the path coefficients of the relationships are significant.

This study used correlational techniques to determine the permissibility and strength of the hypothesised relationships. However, it is important to note that a correlational relationship does not denote a directional cause (Nell, 2015), and therefore should not be interpreted as such. The other weaknesses of this research design are that the

researcher cannot randomise, poor result interpretation, and no manipulation of the independent variable (Nell, 2015).

Despite these weaknesses, this type of design can still be useful in research where the independent variables cannot be manipulated by the researcher. Researchers can also utilise certain techniques to minimise the error variance and to control for extraneous variables to ensure more reliable and valid results (Theron, 2014).

The research design is depicted below.

$$[X11] [X12] \ldots [X1p] \quad Y11\ Y12\ \ldots\ Y1q$$

$$[X21] [X22] \ldots [X2p] \quad Y21\ Y22\ \ldots\ Y2q$$

$$\ldots\ldots\ldots\ldots$$

$$[Xi1] [Xi2] \ldots [Xip] \quad Yi1\ Yi2\ \ldots\ Yiq$$

$$\ldots\ldots\ldots\ldots$$

$$[Xn1] [Xn2] \ldots [Xnp]\ Yn1\ Yn2\ \ldots\ Ynq$$

3.6   RESEARCH PROCEDURE AND SAMPLING

Sampling involves the researcher choosing a part of the total population. In this case, the population was any person working in the formal South African job sector. As this is a very large population, it was not in the researcher's power to gain a random representative sample of the population. Rather, convenience sampling was used to find organisations that were willing to participate in this study. This is a form of non-probability sampling in which the selection of subjects is based on their availability and proximity. This method was used due to time limitations, as well as practical constraints placed on the researcher.

After an organisation agreed to participate, an email with the link to the survey was sent to all members of the organisation. Participants then self-selected to participate in the study. This method was used due to the limited time and resources of the researcher. The bigger the sample size, the more statistical power the results will have. However, the bigger the sample size, the greater the cost to the researcher, as well as the greater the administrative burden.

An online web-based survey was used to collect the data. The measuring instruments that were chosen to measure the constructs were placed online, where the participants were able to access them anytime and anywhere they wanted. This was done to decrease the administrative burden on the researcher, as well as to offer added convenience to the participants. The data collection steps were as follows. Five small to medium-sized organisations consented to be in the study, and a contact within the HR department or at management level agreed to be the contact between the researcher and the potential respondents. An email with a link to the survey was sent to the contact individuals. The contact individuals then sent the email with the link to the survey to the work emails of all the employees in the organisation. The responses were automatically captured on the online survey system that was used. This data was then accessed via a password that was known only to the researcher and exported into an SPSS format so that it could be analysed.

Contact people were used to ensure that there were no ethical issues regarding the researcher having access to the work email addresses of the participants and emailing them at work. This was an ethical consideration, as having emails sent from an outside party could breach the psychological contract in the workplace. Therefore, to negate this and not to breach this psychological contract, a contact person was used.

3.6.1   Profile of the sample

There was a very low response rate to the survey, as well as a high rate of incomplete responses. This was likely due to the impersonal online nature of the survey, which offers people very little motivation to participate in the survey or to finish the survey once they started with it. As a result, the final sample size was 179, which is a relatively small sample size and, as such, has less statistical power. The online questionnaire was also used to gather information on the biographical characteristics of the sample (including age, gender, ethnic group, income, language, education and marital status). The results from this information show that this sample was not representative of the South African formal sector working population. This is most likely due to the use of convenience sampling, and also possibly due to the self-selection nature of participation in this survey.

Table 3.2

Biographical Information of the Sample Population (n = 179)

Age		
Categories	Frequency	Percentage
Under 20	0	0%
20-29	31	17%
30-39	50	28%
40-49	49	27%
50-59	28	16%
60 and above	21	12%
Gender		
Variables	Frequency	Percentage
Male	66	37%
Female	113	63%
Ethnic group		
Variables	Frequency	Percentage
African	14	8%
White	133	74%
Indian	15	8%
Coloured	13	7%
Asian	3	2%
Other	1	1%
Monthly income		
Variables	Frequency	Percentage
Under 4 000	3	2%
4 000 - under 8 000	7	4%
8 000 - under 12 000	18	10%
12 000 - under 16 000	6	3%
16 000 - under 20 000	20	11%
20 000 and above	125	70%
Language		
Variables	Frequency	Percentage

English	131	73%
Afrikaans	34	19%
IsiZulu	4	2%
IsiXhosa	2	1%
Sesotho	1	1%
Other	7	4%

Marital status

Variables	Frequency	Percentage
Single	57	32%
Married	92	51%
Divorced	23	13%
Widowed	2	1%
Other	5	3%

Level of education

Variables	Frequency	Percentage
High school but no Matric	6	3%
Matric	43	24%
Diploma	45	25%
Degree	39	22%
Honours Degree	23	13%
Master's Degree	19	11%
Doctoral	2	1%
Other	2	1%

Province

Gauteng	116	65%
Eastern Cape	1	1%
Free State	3	2%
KwaZulu-Natal	7	4%
Limpopo	2	1%
Mpumalanga	2	1%
Northern Cape	2	3%
Western Cape	45	25%
North-West	0	0%

3.7 MEASUREMENT INSTRUMENTS

Each variable was measured by an instrument that was created to measure that specific latent variable. The psychometric properties of each measure are discussed to ensure that the measures used are psychometrically sound. These measures are accessible in the public domain. A composite questionnaire was compiled by the researcher using different existing questionnaires to measure each latent variable. This questionnaire was then self-administered by the participants.

Five measures were used to measure the latent variables. These measures are the Counterproductive Work Behaviour Checklist (Spector et al., 2006), Lee and Allen's OCB Scale (Lee & Allen, 2002), the Emotional Demands and Emotion-Rule Dissonance Scale (Bakker et al., 2003), the Short Dark Triad 3.1 (Jones & Paulhus, 2014) and Colquitt's Organizational Justice Scale (Colquitt, 2001).

3.7.1 The counterproductive work behaviour checklist

One of the biggest criticisms of research on CWB is its reliance on self-report measures. Many researchers have proposed a triangulation of self- and peer reports to solve this problem (De Jonge & Peeters, 2009; Fox, Spector, Goh, & Bruursema, 2007). However, a recent meta-analysis has shown that peer reports of CWB do not offer any incremental value above self-reports of CWB. The meta-analysis by Berry, Carpenter, and Barratt (2012) reached the conclusion that peer and self-reports of CWB correlate moderately to highly with each other. The study also found that peer reports report a narrower variety of CWB than self-report, and offered little incremental variability (Berry et al., 2012). This research shows that there is little added value in using peer reports of CWB and, as such, self-reports are a sufficient measure of CWB.

The counterproductive work behaviour checklist (CWB-C) comes in two versions, a full 45-item scale and a shorter 32-item scale (Spector et al., 2006). The full 45-item scale was designed to be scored as either overall CWB (all items), or as two sub-scales (43 items), which are classified into CWB directed toward the organisation versus that directed towards people. In the case of this research, as a single definition of CWB is being used, the full scale was used with a single composite score of CWB. The participants are asked to select how frequently, on a five-point Likert scale (1 =

never to 5 = everyday), they performed a certain act while at work (Spector et al., 2006). The total score is simply the sum of all 45 items, which gives a single score on CWB, where a high score indicates a high level of CWB acts performed (Spector et al., 2006). According to Spector and colleagues (2006), this measure shows acceptable reliability, as the internal consistency for the scale was good, with a coefficient alpha of .90.

3.7.2   Lee and Allen's organisational citizenship behaviour scale

The measure that was used to measure OCB was created by Lee and Allen (2002). It was created using items from previous OCB measures, but excluding any items that could also indicate CWB (Lee & Allen, 2002). Therefore, this made this measure appropriate for the current study, as it does not include any items that indicate CWB and could have led to problems in the results. The measure is short and has two subsections for OCB, which comprise organisationally and individually directed OCB. The items are placed on a seven-point Likert scale (1 = never to 7 = always) to indicate how often one participates in the behaviour. Items 1 to 8 measure individually directed OCB and items 9 to 16 measure organisationally directed OCB (Lee & Allen, 2002). According to Lee and Allen (2002), this measure shows an acceptable level of reliability, with the reliabilities for the two scales being .83 (individually directed OCB) and .88 (organisationally directed OCB).

3.7.3   The emotional Demands and Emotion-rule Dissonance scale

Emotional demands were measured using the measurement created by Bakker et al. (2003), called the Emotional Demands and Emotion-rule Dissonance scale. This scale has two subsections, although only the emotional demands sub-scale was used in this research. This is a six-item scale using a five-point Likert scale (1 = never to 5 = always). The researchers adapted this measure from a measure designed by Van Veldhoven and Meijman (1994, as cited in Bakker et al., 2003).

3.7.4   The Short Dark Triad 3.1

A concern when using self-report measures about socially malevolent personality traits is that, when participating in the measure, the respondents will give socially desirable responses. Research has been done in this area that has shown that

narcissism was positively related to socially desirable responding; however, there was a negative correlation between Machiavellianism and psychopathy and socially desirable responding (Kowalski, Rogoza, Vernon, & Schermer, 2018). This suggests that respondent with higher antagonistic traits are less concerned with socially desirable responding (Kowalski et al., 2018). Therefore, for this study there was a slight concern about social desirability bias in the narcissism scale, but this problem was unlikely to affect the other two scales in the dark triad measure.

The dark triad personality factors were measured with the Short Dark Triad 3.1 (SD3.1), which is a short measure of the three dark triad personality traits. This measure was created by Jones and Paulhus (2014) and has 27 items, which are scored on a five-point Likert scale (1 = strongly disagree to 5 = strongly agree). Items 1 to 9 of the Machiavellianism sub-scale measure the Machiavellianism personality trait, and all items are positively scored (Jones & Paulhus, 2014). Items 1 to 9 of the narcissism sub-scale measure the narcissism personality trait, and items 2, 6 and 8 are negatively scored (Jones & Paulhus, 2014). Items 1 to 9 of the psychopathy sub-scale measure the psychopathy personality trait, and item 2 is negatively scored (Jones & Paulhus, 2014).

While this measure is relatively new, it has shown construct validity in many studies. A validation study was conducted on the SD3.1, and the results showed that the overall model fit for the measure was good, with the reliabilities of the sub-scales ranging from .68 to .78 (Jones & Paulhus, 2014). The reliabilities of the three sub-scales were assessed in another study. The results showed that the Machiavellianism sub-scale had a Cronbach's alpha of .74, the narcissism sub-scale had a Cronbach's alpha of .71, and the psychopathy sub-scale had a Cronbach's alpha of .81 (Jones & Paulhus, 2017). The SD3.1 was also compared to other, similar measures to assess its construct validity. Its concurrent validity when compared to the SD3 ranged from .68 to .78, and its validity when correlated with the DD (Dirty Dozen) was .46 to .56. This shows that this measure has an acceptable level of reliability and validity.

The use of a personality measure can be considered a psychological act. Therefore, one would need to be registered as an industrial psychologist with the HPCSA to be able to administer and interpret this type of measure. It therefore could be regarded as

a concern that the researcher was still a Master's student, and therefore not registered as such. However, the supervisor of the researcher is registered as an industrial psychologist with the HPCSA and therefore there are no legal issues in the use of this test. It can also be noted that this test is not on the HPCSA's list of classified tests.

3.7.5   Colquitt's organisational justice scale

The measure that was used to measure organisational justice was created by Colquitt (2001). This measure has four subsections, as it further separates interactional justice into interpersonal and informational justice (Colquitt, 2001). A five-point Likert scale is used to score the measure (1 = to a small extent to 5 = to a large extent). The model showed good fit as well as close fit. This shows that the measure is a permissible measure of organisational justice. Colquitt (2001) also demonstrated that the measure has construct validity. This shows that this measure is a permissible measure of organisational justice.

3.8   MISSING VALUES

Before the data that was collected could be analysed, the problem of missing values in the data had to be dealt with. This was a large concern in this study, as many respondents left the survey during its completion and did not complete the survey. There are different methods that can be used to deal with missing values. The methods that can be used to solve the issue of missing values are: list-wise deletion, pair-wise deletion, imputation by matching, multiple imputations, and full information maximum likelihood. As many of the responses were incomplete and not missing a few values, these incomplete responses were deleted and were not used during the statistical analyses. This decision was made due to the large quantity of missing values in the incomplete questionnaires, which posed a concern about the error this could introduce into the results.

3.9   STATISTICAL ANALYSES

The use of certain types of statistical analyses depends on the type of research questions the study is trying to answer.

3.9.1   Data analysis

In this study, the research questions were quantitative in nature and, as such, the analyses used were also quantitative in nature. In this research study, all the data gathered was analysed using a variety of quantitative techniques. These techniques included item analysis and partial least squares structural equation modelling. The objective of data analysis is to test the measurement and structural models. A short explanation of the quantitative techniques and programs used in this study is detailed.

3.9.2   Computer program

Statistica version 12 was used to perform the item analysis, which provided information on the reliability of the items and constructs. SmartPLS version 3 was used to test the hypotheses and to see if the relationships between the variables were statistically significant.

3.9.3   Item analysis

Measures of constructs are based on the idea that the items of a test will elicit a response that is a function of their level in the construct. Therefore, the items of a measure are developed to test a person's level on the construct. The presupposition behind this is that the item elicits an uncontaminated response that is only a function of the latent variable. This aim, however, is not always accomplished, therefore it is important to ensure that the items in the measures being used are in fact reflecting the variable they are meant to.

Item analysis was used to examine the internal consistency of the items in the measures to ensure that all the items were measuring the construct they are meant to. Item analysis is used to identify poor items that not only elicit a response for the latent variable they are meant to. All the items in all the measures that were used in this study were examined using item analysis. There was concern about the reliability of the narcissism personality trait subsection of the SD3.1 and, as such, item analysis was used to identify poor items, which were then removed. This did not improve the reliability of the measure enough, and the subsection therefore was removed. This is explained in more detail in Chapter 4.

3.9.4   Partial least squares structural equation modelling

Partial least squares structural equation modelling (PLS) was used to analyse the data in the present study. This approach uses partial least squares, and not maximum likelihood, as with SEM (Monecke & Leisch 2012). PLS is a useful tool when researchers are testing exploratory models. Another advantage of the PLS method is its usefulness in prediction-orientated research, where it can be used to focus on explaining endogenous constructs (Henseler, Ringle, & Sinkovics, 2009). PLS also has an advantage in its distribution-free approach, which means the data does not need to be normally distributed (Chin, 1998).

PLS uses two sets of linear equations that are known as the inner model and the outer model. These two models are comparable to the measurement and structural model in SEM. The outer model, like SEM's structural model, analyses the relationship between the latent variables and their observed variables, while the inner model, like SEM's structural model, analyses the relationships between the latent variables (Hair, Ringle, & Sarstedt, 2011).

To start the analysis process, the reliabilities of the latent variables first were assessed. This was done by examining the composite reliabilities, average variances and R-squares. After this preliminary investigation of the reliabilities, the reliability and validity of the outer model were tested next. When the outer (measurement) model was tested, it was discovered that there was a lack of reliability in the narcissism personality type subsection of the SD3.1. The subsection was then investigated further using item analysis. In conclusion, the subsection of the measure was removed from the study due to a concern over a lack of measurement accuracy. This investigation and removal are explained in more detail in Chapter 4. Chapter 4 also details the re-drawing of the structural model and the re-writing of the hypotheses that were necessitated by this removal.

Next, the relationships between the variables were tested for the inner model. To test the significance of the relationships, a bootstrapping sampling procedure was performed, and after the bootstrapping, the accuracy of the path estimates to the true effects was assessed. As there are moderating effects in the current study, these were also analysed using PLS. This analysis involves two steps; first, an iterative process is used in which latent variable scores are estimated for each variable, which are then

entered as dependent and independent variables into one or more regressions, then second, testing the moderating effects in multiple regression through PLS path modelling.

3.10   ETHICAL CONSIDERATIONS

When conducting a research study, it is important to take note of any ethical considerations. This is to ensure that the dignity, rights, well-being and safety of the participants are preserved. The researcher consulted the professional code of ethics and guidelines for ethically responsible research that were applicable to this study. The present study can be considered a low-risk study, as there are no serious potential risks associated with participating in it. The largest ethical concern in this study was due to the fact that the study is focused on CWB and, as such, it was very important that the anonymity and confidentially of the respondents were ensured. Some of the questions in the CWB-C related to behaviour that could be considered illegal or gross misconduct. Therefore, if it was discovered that some individuals had high levels of these maladaptive traits, the researcher was not able to identify them. The data collection method used and the survey program used to collect the data ensured that the researcher did not have any access to information that could identify the respondents. Therefore, it was not possible to discover a respondent's identity. This mechanism was employed to ensure that the respondents' right to confidentiality was protected.

Another ethical concern was that the maladaptive behaviour of the participants that is identified in the CWB-C and the SD3.1 may cause the participant distress by bringing their attention to these behaviours through participation in the survey. Therefore, the issue regarding providing psychological help arose should respondents want it. To ensure that the ethical responsibly of the researcher was upheld with regard to participants in this manner, a number was provided for a registered counselor in the informed consent form that the participants could contact should they have felt any distress. However, it is argued that it was not the ethical responsibility of the researcher to provide payment for the services of the registered counselor, but rather just to recommend a counsellor, as it was not the researcher's actions that created the maladaptive behaviour. Since the researcher was not involved in creating the

maladaptive behaviour of the participants, the provision of the contact details of a counsellor ensured that the researcher's ethical duty was fulfilled.

Furthermore, the participants had the right to decide voluntarily if they wished to participate in the study or not. The participants were also advised that they could leave the study at any time. It is also an ethical requirement that the researcher obtains informed consent from all the participants. Therefore, the participants were informed about 1) the objectives and purpose of the research, 2) what participation in the research would involve, 3) how the research results would be disseminated and used, 4) who the researcher was and her affiliation, 5) how further inquiries could be made, 6) their rights as participants, and 7) where they could gain more information about their research rights.

It can be concluded that no major ethical threats were posed by the study, as the above-mentioned procedures were followed to ensure the protection of the participants. Consequently, the researcher is confident that all ethical and legal requirements were complied with.

3.11   CHAPTER SUMMARY

Chapter 3 has provided information on the methodological choices made by the researcher throughout the research process. In summary, an *ex post facto* correlational research design was used to collect data for the specific purposes of this study. Non-probability convenience sampling was used to collect a sample of the South African working population in the formal sector. Quantitative data was collected using a self-administered online questionnaire. The researcher made use of the following measuring instruments: The Counterproductive Work Behaviour Checklist (Spector et al., 2006), Lee and Allen's OCB Scale (Lee & Allen, 2002), the Emotional Demands and Emotion-rule Dissonance scale (Bakker et al., 2003), the Short Dark Triad 3.1 (Jones & Paulhus, 2014), and Colquitt's Organizational Justice scale (Colquitt, 2001).

The data was analysed using item analysis and PLS modelling. Chapter 4 presents the research findings derived from the statistical analyses and the interpretation of these findings.

CHAPTER 4

RESULTS

4.1   INTRODUCTION

This chapter details the results that were obtained using the methods described in Chapter 3. Item analysis was used to assess the reliability of the measures with which the latent variables (CWB, OCB, organisational justice, the dark triad and emotional demands) were measured. After item analysis, PLS (SEM) was used to give further evidence of reliability, as well as to investigate the relevant paths between the variables to test the model fit.

Therefore, the purpose of this chapter is to present and discuss the statistical results. Firstly, the reliability of the outer model was tested. None was found and, as a result, an investigation into the reliability was conducted. The problematic measure was found and attempts were made to rectify its lack of reliability. When a suitable level of reliability was not found, the measure was deleted. The model was re-drawn and the hypotheses were revised. This new model was then assessed using item analysis to assess its reliability. A suitable level of reliability was found, after which the path analyses of the structural (inner model) were tested to investigate the relationships in the structural model. Lastly, the final scores and hypotheses were interpreted.

4.2   ITEM ANALYSIS: VALIDATING THE FIT OF THE MEASUREMENT MODEL

Item analysis provides information on the reliability of the measures used in a study, and thus indicates the value of the statistical analyses performed. The reliability and validity criteria (Cronbach's alpha) used in this study are considered satisfactory, at ≥ .70 (Hair et al., 2011). Item correlations evaluate the consistency between items and is a sub-type of internal consistency reliability.[1] Item analysis was performed on all the items in the composite questionnaire used during data collection.

The summary of the item analysis results can be seen in Table 4.1. This table shows the Cronbach's alphas and average inter-item correlation of all the total scales, with

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[1] Values between 1.0 and > .05 indicate excellent reliability, while values between < .05 and .00 indicate acceptable reliability (Tabachnick & Fidell, 2013).

the exception of the Short Dark Triad 3.1, for which the Cronbach's alphas and average inter-item correlations are shown for the three sub-scales. Item analysis was not performed on the sub-scales, except for the SD3.1, as the research only used the total scores of the other measures.

Table 4.1

Internal Consistency Reliabilities of Scales

Scale	Sample size	Number of items	Mean	Standard deviation	Cronbach's alpha	Average inter-item correlation
OCB	179	16	91.77	11.66	0.92	0.57
CWB	179	22[2]	29.98	6.34	0.86	0.38
OJ	179	20	13.41	3.05	0.79	0.54
ED	179	6	18.85	4.97	0.86	0.58
PSY	179	9	16.98	5.02	0.79	0.45
NAR	179	9	25.04	4.56	0.69	0.29
MACH	179	9	23.34	5.90	0.83	0.49

OCB = Organisational citizenship behaviour; CWB = counterproductive workplace behaviour; OJ = organisational justice; ED = emotional demands; PSY = psychopathy; NAR = narcissism; MACH = Machiavellianism

4.2.1 Organisational citizenship behaviour

Lee and Allen's (2002) OCB scale obtained a Cronbach's alpha coefficient of 0.92, which shows high internal consistency reliabilities.[3] The Cronbach's alpha coefficient did not improve if any of the individual items were deleted, and as such none of the items were considered for removal.

The internal consistency was further supported by an average inter-item correlation of .57. This can be considered a good level of inter-item correlation, as the value is

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[2] It should be noted that some items were excluded due to a lack of variation in the responses.

[3] Composite reliabilities should be higher than .07 to indicate a reasonable level of internal consistency reliability (Hair et al., 2011).

both positive and above 0.[4] However, according to Netemeyer (2001), the average inter-item correlation should be .3 or higher. When using this more stringent criterion for acceptable levels of inter-item correlation, the average inter-item correlation of Lee and Allen's (2002) OCB scale is still considered acceptable. Therefore, the overall results show that the measure was measuring OCB, as it was supposed to.

4.2.2   Counterproductive work behaviour

The counterproductive work behaviour checklist (CWB-C) obtained a Cronbach's alpha coefficient of .86, which indicates high internal consistency reliability. The Cronbach's alpha coefficient did not improve if any of the individual items were deleted, and as such none of the items were considered for removal.

The internal consistency was further supported by an average inter-item correlation of .40. This can be considered an acceptable level of inter-item correlation, as the value is both positive and above .3. Therefore, the overall results show that the CWB-C was measuring CWB, as it was supposed to.

4.2.3   Organisational justice

Colquitt's (2001) organisational justice scale obtained a Cronbach's alpha coefficient of .79, which indicates high internal consistency reliability. The Cronbach's alpha coefficient only showed improvement if one of the individual items was deleted. However, the improvement was very slight, and as such the item was not considered for removal.

The internal consistency was further corroborated by an average inter-item correlation of .54. This can be considered a high level of inter-item correlation, as the value is both positive and above .3. Therefore, the overall results show that Colquitt's (2001) organisational justice scale was measuring organisational justice, as it was supposed to.

4.2.4   Emotional demands

The Emotional Demands and Emotion-Rule Dissonance scale (Bakker et al., 2003) obtained a Cronbach's alpha coefficient of .86, which indicates high internal

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[4] Values between 1.0 and > .05 are excellent, while values between < .05 and .00 are acceptable (Tabachnick & Fidell, 2013).

consistency reliability. The Cronbach's alpha coefficient did not improve if any of the individual items were deleted, and as such no items were considered for removal.

The internal consistency was further supported by an average inter-item correlation of .58. This can be considered a high level of inter-item correlation, as the value is both positive and above .3. Therefore, the overall results show that the Emotional Demands and Emotion-Rule Dissonance Scale was measuring emotional demands, as it was supposed to.

4.2.5   The dark triad

As the sub-scales results of The Short Dark Triad 3.1 (SD3.1), namely psychopathy, narcissism and Machiavellianism, were used separately, the results of each sub-scale are discussed separately.

4.2.5.1   *Psychopathy*

The psychopathy sub-scale of the SD3.1 obtained a Cronbach's alpha coefficient of .79, which indicates high internal consistency reliability. The Cronbach's alpha coefficient did not improve if any of the individual items were deleted, and as such no items were considered for removal.

The internal consistency was further supported by an average inter-item correlation of .45. This can be considered an acceptable level of inter-item correlation, as the value is both positive and above .3. Therefore, the overall results show that the psychopathy sub-scale of the SD3.1 was measuring psychopathy, as it was supposed to.

4.2.5.2   *Narcissism*

The narcissism sub-scale of the SD3.1 obtained a Cronbach's alpha coefficient of .69, which indicates a slightly less than acceptable level of internal consistency. There is some concern over this measure; however, as the level of internal consistency is only slightly less than what is considered acceptable, the measure was not removed. The Cronbach's alpha coefficient did not improve if any of the individual items were deleted, and as such no items were considered for removal.

The internal consistency was also supported by an average inter-item correlation of .29. This can be considered an acceptable level of inter-item correlation when using Tabachnick & Fidell's (2013) definition of acceptable inter-item correlation, as the value is both positive and above 0. Therefore, the overall results show that the narcissism sub-scale of the SD3.1 was for the most part measuring narcissism, as it was supposed to. However, there is still some concern about this measure.

4.2.5.3   *Machiavellianism*

The Machiavellianism sub-scale of the SD3.1 obtained a Cronbach's alpha coefficient of .83, which indicates high internal consistency reliability. The Cronbach's alpha coefficient did not improve if any of the individual items were deleted, and as such no items were considered for removal.

The internal consistency was further supported by an average inter-item correlation of .49. This can be considered an acceptable level of inter-item correlation, as the value is both positive and above .3. Therefore, the overall results show that the Machiavellianism sub-scale of the SD3.1 was measuring Machiavellianism, as it was supposed to.

4.2.6   Decision regarding the reliability of the latent variable scales

The item analysis was used to assess the psychometric integrity of the indicator variables. The results of the item analysis provided satisfactory evidence to reinforce the decision to include the items in the measurement instruments. All items, with the exception of the narcissism sub-scale of the SD3.1, were found to be internally consistent and reliable at an acceptable level, as their Cronbach's alphas were above .07 (Hair et al., 2011). Despite the concern over the narcissism scale due to its slightly less than acceptable levels of reliability, the analyses were continued with the inclusion of this scale. As the researcher did not find any significantly poor items, no deletions were made at this stage. The results were corroborated by the high and satisfactory levels of inter-item correlations that were obtained for each scale total, as well as for the sub-scales of the SD3.1. The final conclusion was that the results of the item analysis were satisfactory and therefore warranted subsequent analyses.

4.3   ANALYSIS OF PARTIAL LEAST SQUARES

A two-step process is used when applying PLS; first, the measurement model, referred to as the outer model, is tested, followed by the testing of the structural model, referred to as the inner model (Hair et al., 2011). With this approach, if the relevant reliability criteria of the measurement model are not met, it creates questions about the results of the structural model. The evaluation of the measurement model is important, as this tests the measurement quality of the constructs that will be evaluated in the structural model. Thus, the quality of the measurements used to measure the latent variables has to be assured before the relationships among the variables are tested. After the reliability of each scale is assured, the path coefficients can be examined to determine the strength and significance of the hypothesised relationships.

4.3.1   Evaluation and interpretation of the measurement model

Reliability analysis is used to study the reliability of the scales used to measure the latent variables. The composite reliability and the average variance extracted (AVE) were used to examine the reliability of the measures of the latent variables. When the composite reliability is equal to or higher then .70, it is deemed acceptable (Hair et al., 2011). The reliability scores of the latent variables, except for narcissism, were found to be > .70 and can be considered adequate. However, the composite reliability of the narcissism scale of the SD3.1 is at 0, which is not acceptable. This shows that this measure lacks reliability. Further investigation of the sub-scale was needed.

The AVE is a stricter assessment of reliability, as it explains the amount of variance in the indicator variables that is explained by the latent variable. Thus, it assesses whether the measures are measuring the latent variable they claim to measure. A score of .50 and above indicates that the measure does measure the relevant latent variable (Amaro, Abrantes & Seabra, 2015). This means that the construct explains 50% or more of the variance in the measure. The AVE is a stricter assessment of reliability, and the results reflect this. Only the measure of emotional demands reached the relevant criteria to show acceptable reliability. However, the other measures, except for the measure of narcissism and CWB, were close to the cut-off point, and the constructs explain 40% to 44% of the variance in the measure. Thus, these results, while somewhat concerning, can be considered to show sufficient reliability.

The AVE results for the CWB-C show that there was a lot of variance in how people answered the questions, and the construct only explains 25% of the variance in the measure. Therefore, while the statistical investigation may continue, the results regarding CWB should be interpreted with caution. The AVE results for the narcissism sub-scale show that the construct explains very little variance – only 12% – in the measure. Therefore, when this information is combined with that of the composite reliability, it shows that a further investigation of the narcissism sub-scale is needed.

The reliability statistics can be found in Table 4.2.

Table 4.2

Reliability Statistics of the PLS Model

Scale	Composite reliability	AVE
OCB	0.91	0.40
CWB	0.86	0.23
OJ	0.94	0.44
ED	0.85	0.50
PSY	0.81	0.40
NAR	0	0.12
MACH	0.85	0.40

OCB = Organisational citizenship behaviour; CWB = counterproductive workplace behaviour; OJ = organisational justice; ED = emotional demands; PSY = psychopathy; NAR = narcissism; MACH = Machiavellianism

4.3.2   The investigation of the narcissism sub-scale

To investigate the narcissism sub-scale, an exploratory factor analysis (EFA) was performed using oblimin rotation. These results were interpreted and a new measure of narcissism was tested to assess its reliability.

4.3.2.1   Results of exploratory factor analysis and decision regarding the narcissism scale

When interpreting the factor loadings, it was discovered that only items 1, 2, 6 and 8 seemed to be loading on the same factor. However, not to be simply led by the

statistics, each item that did not load on the same factor was investigated to see if its removal from the measure could be motivated conceptually. Item 3, "Many group activities tend to be dull without me", seems to fall conceptually under the construct of narcissism, as it attempts to assess an over-evaluation of someone's own sense of self-importance. Therefore, this item was not removed. Item 4, "I know that I am special because everyone keeps telling me so", seems to rely on concrete external evidence of one's importance, as one has to be told by others. This does not assess one's sense of over-inflated self-importance, as it asks for tangible external proof. Therefore, this item rather assesses how often someone is told they are special, which is not necessarily related to narcissism. Thus, this item was removed from the narcissism sub-scale. Item 5, "I like to get acquainted with important people", loaded on the same factor as the items from the Machiavellianism scale. Conceptually this is logical, as getting acquainted with those in power for manipulation purposes falls under the definition of Machiavellianism (O'Boyle et al., 2012). Therefore, this item was deleted from the narcissism sub-scale. Item 7, "I have been compared to famous people" also focuses on a measurement of external evidence from others, rather than an internal grandiose sense of self. This question is also very vague and could apply to anyone who looks like a celebrity, and thus is not necessarily assessing narcissism. Therefore, this item was also removed. Item 9, "I insist on getting the respect I deserve" seems to be assessing a grandiose sense of self-importance. Therefore, this item was not removed from the narcissism sub-scale.

After the narcissism measure was changed and the items previously discussed were removed, the reliability of the measure was tested again. However, the composite reliability was still too low and did not exceed the .70 hurdle. In consultation with a statistical subject matter expert (SME), and based on all the reliability results and an examination of the subsection itself, it was recommended that the measure be removed from further analyses (M. Kidd, personal communication, September 8, 2017). Therefore, it was decided that the narcissism sub-scale would be removed from further analyses. This was done because the low reliability results meant there would be low measurement accuracy, and the results from such a measure could not be interpreted with any level of confidence or accuracy. Due to the removal of this measure from the study, that indicator variable needed to be removed from the measurement model, and the latent construct also needed to be removed from the

structural model. Thus, the hypotheses also had to be rewritten to reflect the new model.

4.3.3   The new structural model and hypotheses

As this research tested a structural model, a new structural model had to be created that could be tested with confidence in its measurement accuracy. As discussed previously, the measurement model should fit before the structural model can be tested. Therefore, the removal of the narcissism sub-scale was necessary for measurement model fit before the relationships among the variables could be examined in the form of the structural model.. As a new measurement and structural model were to be fitted, this necessitated the creation of a new model that excluded narcissism, which could then be tested. The subsequent hypotheses based on this new model were also written so that they could be tested along with the new model.

4.3.3.1   The structural model

The new structural model that excluded narcissism can be seen in Figure 4.1. New substantive hypotheses based on this new structural model were needed for the study. These are the hypotheses that are tested in Chapter 4 to determine whether these relationships are statistically significant.The new structural model is shown in Figure 4.1 and Table 4.3 provides a summary of the latent variables, as well as the dummy variables that are included in Figure 4.1.
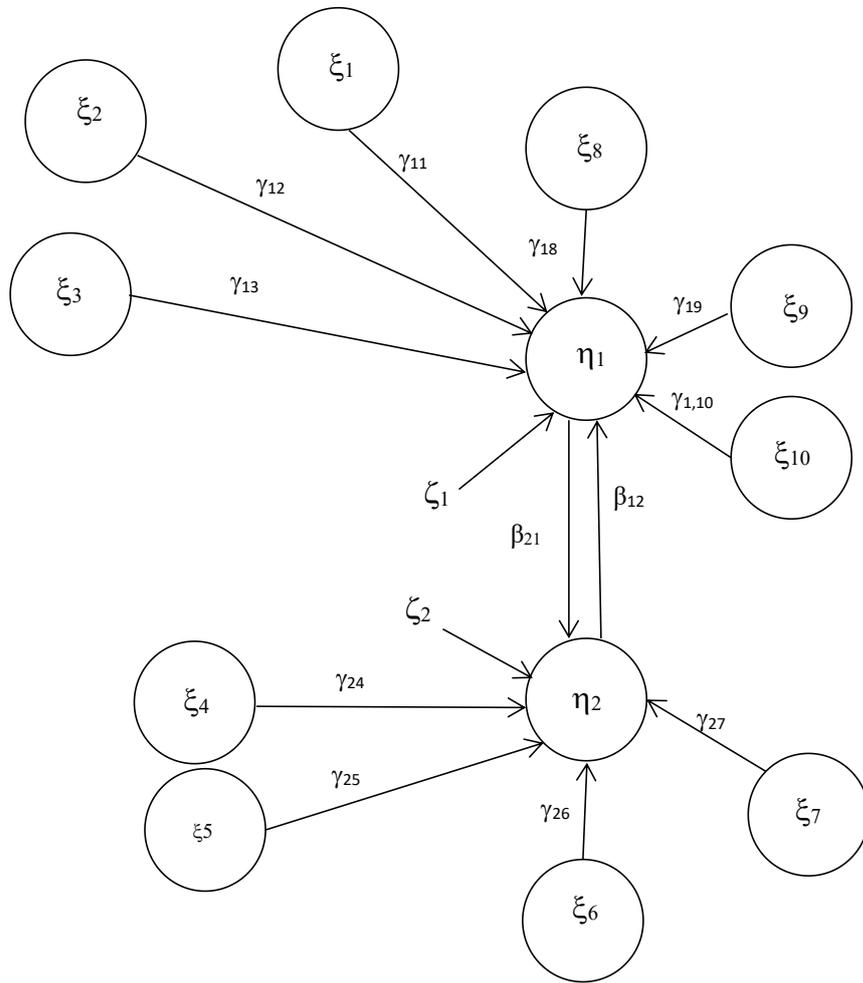
Figure 4.1. The new structural model.

Table 4.3

Summary of Latent Variables in the New Structural Model

ξ_1	Organisational justice
ξ_2	Machiavellianism
ξ_3	Psychopathy
ξ_4	Emotional demands
ξ_5	Emotional demands*Organisational justice
ξ_6	Mach*Emotional demands
ξ_7	Psychopathy*Emotional demands
ξ_8	Organisational justice*Emotional demands
ξ_9	Emotional demands*Mach
ξ_{10}	Emotional demands*Psychopathy
η_1	OCB
η_2	Counterproductive work behaviour

4.3.3.2   Substantive hypotheses

The re-written hypotheses based on Figure 4.1 are listed below.

Hypothesis 1: OCB (η_1) has a significant positive effect on CWB (η_2).

Hypothesis 2: CWB (η_2) has a significant positive effect on OCB (η_1).

Hypothesis 3: Organisational justice (ξ_1) has a significant positive effect on OCB (η_1).

Hypothesis 4: Machiavellianism (ξ_2) personality trait has a significant positive effect on OCB (η_1).

Hypothesis 5: Psychopathy (ξ_3) personality trait has a significant negative effect on OCB (η_1).

Hypothesis 6: Emotional demands (ξ_4) have a significant positive effect on CWB (η_2).

Hypothesis 7: Emotional demands (ξ_4) have a significant negative moderator effect on the relationship between organisational justice (ξ_1) and OCB (η_1).

Hypothesis 8: Emotional demands (ξ_4) have a significant positive moderator effect on the relationship between Machiavellianism (ξ_2) personality trait and OCB($\eta1$).

Hypothesis 9: Emotional demands (ξ_4) have a significant positive moderator effect on the relationship between psychopathy (ξ_3) personality trait and OCB($\eta1$).

Hypothesis 10: Organisational justice (ξ_1) has a significant negative moderator effect on the relationship between emotional demands (ξ_4) and CWB (η_2).

Hypothesis 11: Machiavellianism (ξ_2) personality trait has a significant positive moderator effect on the relationship between emotional demands (ξ_4) and CWB (η_2).

Hypothesis 12: Psychopathy (ξ_3) personality trait has a significant positive moderator effect on the relationship between emotional demands (ξ_4) and CWB (η_2).

After the substantive hypotheses were written, statistical hypotheses had to be written based on these hypotheses so they could be tested empirically. Again, these are the hypotheses that were tested for statistical significance, as discussed in Chapter 4.

4.3.3.3   *Statistical hypotheses*

The statistical hypotheses presented here are derived from the substantive hypotheses and represent the ideas inherent in the structural model, the research design and the statistical analysis. These statistical hypotheses were created based on the new structural model.

Hypothesis 1
H_{01}: $\beta_{21} = 0$
H_{a1}: $\beta_{21} > 0$

Hypothesis 2
H_{02}: $\beta_{12} = 0$
H_{a2}: $\beta_{12} > 0$

Hypothesis 3
H_{03}: $\gamma_{11} = 0$
H_{a3}: $\gamma_{11} > 0$

Hypothesis 4
H_{04}: $\gamma_{12} = 0$
H_{a4}: $\gamma_{12} > 0$

Hypothesis 5

H_{05}: $\gamma_{13} = 0$

H_{a5}: $\gamma_{13} < 0$

Hypothesis 6

H_{06}: $\gamma_{24} = 0$

H_{a6}: $\gamma_{24} > 0$

Hypothesis 7

H_{07}: $\gamma_{18} = 0$

H_{a7}: $\gamma_{18} < 0$

Hypothesis 8

H_{08}: $\gamma_{19} = 0$

H_{a8}: $\gamma_{19} > 0$

Hypothesis 9

H_{09}: $\gamma_{1,10} = 0$

H_{a9}: $\gamma_{1,10} > 0$

Hypothesis 10

H_{08}: $\gamma_{25} = 0$

H_{a8}: $\gamma_{25} < 0$

Hypothesis 11

H_{09}: $\gamma_{26} = 0$

H_{a9}: $\gamma_{26} > 0$

Hypothesis 12

H_{010}: $\gamma_{27} = 0$

H_{a10}: $\gamma_{27} > 0$

Once the new model had been drawn and the hypotheses stemming from this model had been written, the statistical analyses were continued.

4.3.4   The investigation and interpretation of the new measurement model

The composite reliability and the average variance extracted (AVE) were used to examine the reliability of the measures of the latent variables of the new measurement model. When the composite reliability is equal to or higher then .70, it is deemed acceptable (Hair et al., 2011). The reliability scores of the latent variables were found to be >.70, and thus are acceptable.

The AVE is a stricter assessment of reliability, as it explains the amount of variance in the indicator variable that is explained by the latent variable. A score of .50 and above indicates that the measure does measure the relevant latent variable (Amaro et al., 2015). Again, only the measure of emotional demands achieved the relevant criteria to show acceptable reliability. However, the other measures, except for the measure of CWB, were close to the cut-off point and the constructs explained 45% to 49% of the variance in the measures. Thus, these results, while somewhat concerning, can be considered to show sufficient reliability.

The AVE results for the CWB-C show that there was a lot of variance in how people answered the questions, and the construct only explains 30% of the variance in the measure. Therefore, while the statistical investigation may continue, the results regarding CWB should be interpreted with caution.

The reliability statistics can be found in Table 4.4.

Table 4.4

Reliability Statistics of the New PLS Model

Scale	Composite reliability	AVE
OCB	0.91	0.48
CWB	0.85	0.30
OJ	0.94	0.49
ED	0.8	0.58
PSY	0.83	0.47
MACH	0.85	0.45

OCB = Organisational citizenship behaviour; CWB = counterproductive workplace behaviour; OJ = organisational justice; ED = emotional demands; PSY = psychopathy; MACH = Machiavellinism

More analyses were performed to assess construct validity. Construct validity is the extent to which a measure measures the latent variable it is supposed to measure. Thus, the discriminant validity of each scale was tested, using the heterotrait-monotrait ratio. Discriminant validity looks at the extent to which each scale measures something unique and does not overlap with the other scales. All the scales showed discriminant validity, and it can be concluded that each scale is measuring a unique latent variable.

A PLS bootstrap was conducted to assess the reliability of the items included in the scales measuring the latent variables. This analysis was done to determine whether or not the outer loadings were significant. This was done by assessing whether 0 fell within the 95% confidence interval. If it does, then the outer loadings are not significant; however, if 0 does not fall within the 95% confidence interval, this confirms the outer loadings' significance and therefore their reliability. Table 4.5 shows the relationships between the measures and their relevant latent variables. Again, it should be noted that, due to a lack of variation in the answers to the questions, some of the CWB items were left out of the analysis.

Table 4.5

Outer Loadings

Latent variable	Path	Original sample	95% confidence interval (lower)	95% confidence interval (upper)	Description
CWB	CWB1←CWB	0.306	0.13	0.473	Significant
	CWB2←CWB	0.515	0.296	0.693	Significant
	CWB3←CWB	0.493	0.323	0.64	Significant
	CWB4←CWB	0.557	0.387	0.682	Significant
	CWB6←CWB	0.464	0.252	0.609	Significant
	CWB12←CWB	0.388	0.172	0.537	Significant
	CWB17←CWB	0.531	0.329	0.677	Significant
	CWB19←CWB	0.536	0.342	0.686	Significant
	CWB20←CWB	0.477	0.193	0.674	Significant
	CWB23←CWB	0.589	0.366	0.73	Significant
	CWB26←CWB	0.606	0.432	0.724	Significant
	CWB27←CWB	0.443	0.236	0.597	Significant
	CWB31←CWB	0.518	0.236	0.692	Significant

	CWB33←CWB	0.586	0.278	0.757	Significant
	CWB34←CWB	0.373	0.108	0.563	Significant
	CWB44←CWB	0.531	0.288	0.706	Significant
	CWB45←CWB	0.561	0.366	0.69	Significant
OCB	OCB1 ← OCB	0.612	0.427	0.748	Significant
	OCB2 ← OCB	0.685	0.547	0.802	Significant
	OCB3 ← OCB	0.621	0.484	0.751	Significant
	OCB4 ← OCB	0.591	0.354	0.751	Significant
	OCB5 ← OCB	0.657	0.49	0.788	Significant
	OCB6 ← OCB	0.629	0.457	0.765	Significant
	OCB7 ← OCB	0.553	0.357	0.719	Significant
	OCB8 ← OCB	0.486	0.283	0.659	Significant
	OCB9 ← OCB	0.462	0.256	0.594	Significant
	OCB10 ← OCB	0.607	0.476	0.713	Significant
	OCB11 ← OCB	0.741	0.644	0.813	Significant
	OCB12 ← OCB	0.713	0.561	0.802	Significant
	OCB13 ← OCB	0.591	0.384	0.746	Significant
	OCB14 ← OCB	0.741	0.565	0.83	Significant
	OCB15 ← OCB	0.686	0.504	0.796	Significant
	OCB16 ← OCB	0.715	0.519	0.836	Significant
Organisational justice	OJ1 ← Organisational justice	0.664	0.284	0.819	Significant
	OJ2 ← Organisational justice	0.668	0.288	0.819	Significant
	OJ3 ← Organisational justice	0.649	0.276	0.821	Significant
	OJ4 ← Organisational justice	0.551	0.233	0.701	Significant
	OJ5 ← Organisational justice	0.646	0.306	0.824	Significant
	OJ6 ← Organisational justice	0.648	0.325	0.824	Significant
	OJ7 ← Organisational justice	0.601	0.235	0.791	Significant
	OJ8 ← Organisational justice	0.64	0.312	0.81	Significant

	OJ9 ← Organisational justice	0.728	0.421	0.848	Significant
	OJ10 ← Organisational justice	0.733	0.456	0.837	Significant
	OJ11 ← Organisational justice	0.774	0.485	0.873	Significant
	OJ12 ← Organisational justice	0.711	0.452	0.834	Significant
	OJ13 ← Organisational justice	0.707	0.411	0.83	Significant
	OJ14 ← Organisational justice	0.676	0.477	0.775	Significant
	OJ15 ← Organisational justice	0.587	0.375	0.711	Significant
	OJ16 ← Organisational justice	0.646	0.427	0.78	Significant
	OJ17 ← Organisational justice	0.638	0.368	0.781	Significant
	OJ18 ← Organisational justice	0.669	0.443	0.773	Significant
	OJ19 ← Organisational justice	0.647	0.422	0.752	Significant
	OJ20 ← Organisational justice	0.654	0.367	0.794	Significant
Emotional demands	ED1←Emotional demands	0.364	-0.398	0.853	Not significant
	ED2←Emotional demands	0.335	-0.434	0.846	Not significant
	ED3←Emotional demands	0.423	-0.352	0.904	Not significant
	ED4←Emotional demands	0.867	-0.1	0.897	Not significant
	ED5←Emotional demands	0.912	-0.329	0.943	Not significant
	ED6←Emotional demands	0.764	-0.021	0.865	Not significant
Machiavellianism	MACH1←Machiavellianism	0.232	0.004	0.432	Significant
	MACH2←Machiavellianism	0.702	0.529	0.79	Significant
	MACH3←Machiavellianism	0.552	0.351	0.685	Significant
	MACH4←Machiavellianism	0.381	0.137	0.573	Significant
	MACH5←Machiavellianism	0.763	0.637	0.827	Significant
	MACH6←Machiavellianism	0.782	0.657	0.849	Significant
	MACH7←Machiavellianism	0.692	0.571	0.792	Significant
	MACH8←Machiavellianism	0.764	0.618	0.835	Significant

	MACH9←Machiavellianism	0.601	0.412	0.719	Significant
Psychopathy	PSY1←Psychopathy	0.743	0.494	0.868	Significant
	PSY2←Psychopathy	-0.074	-0.314	0.186	Not Significant
	PSY3←Psychopathy	0.759	0.585	0.852	Significant
	PSY4←Psychopathy	0.664	0.44	0.789	Significant
	PSY5←Psychopathy	0.586	0.433	0.694	Significant
	PSY6←Psychopathy	0.682	0.44	0.807	Significant
	PSY7←Psychopathy	0.175	-0.07	0.414	Not significant
	PSY8←Psychopathy	0.738	0.607	0.824	Significant
	PSY9←Psychopathy	0.807	0.694	0.875	Significant

OCB = Organisational citizenship behaviour; CWB = counterproductive workplace behaviour; OJ = organisational justice; ED = emotional demands; PSY = psychopathy; MACH = Machiavellianism

These results indicate that the latent variable scales of CWB, OCB, Machiavellinism and organisational justice are statistically significant, and this confirms the reliability of the items in these scales. It can be noted for the measure of psychopathy that all the items, except for items 2 and 7, are statistically significant and their reliability is confirmed. However, the results also show that the items of the emotional demands scale are not statistically significant. This creates some doubt about the reliability of these items. Due to the positive reliability results of this measure in the other analyses, the statistical analyses using this measure continued, although the results for this scale should be interpreted with caution. This is one of the limitations of this study that will be discussed in Chapter 5.

4.3.5   Evaluation and interpretation of the new structural model

The structural model was analysed to assess the strength of the proposed relationship between the latent variables, and thus the model fit. The purpose of the PLS structural model analysis was to examine to what extent the variables are related to each other. The relationships between the exogenous and endogenous latent variables, and their

influence, were tested, as well as the relationships among the endogenous latent variables. The analysis of the structural model, also known as the inner model, included testing for multicollinearity, evaluation of the R-squares and evaluation and interpretation of the main and moderating effects.

It should be noted that two PLS models were fitted. This was done because PLS modelling does not permit bi-directional relationships, as that proposed between OCB and CWB. Therefore, the relationships can only head in one direction and, as the structural model used in this research has a bi-directional relationship, two models were fitted. This was done to test the relationship between OCB and CWB in both directions as proposed in the structural model. These two models can be seen in Figure 4.2 and Figure 4.3.

The models in Figures 4.2 and 4.3 show the relationships among the latent variables, where the blue circles indicate the latent variables and the green circles show the moderating effects. The blues circles are labelled as follows; 'OJ' is organisational justice, 'DT-MACH' is Machiavellianism, 'DT-PSY' is psychopathy, 'EMDE' is emotional demands, 'OCB' is organisational citizenship behaviour and 'CWB' is counterproductive workplace behaviour. The labels for the green circles showing the moderating effects are also discussed. The hypothesis that emotional demands moderates the relationship between organisational justice and OCB is captured by the circle labelled 'EMDE*OJ'. The hypothesis that emotional demands moderates the relationship between Machiavellianism and OCB is labelled 'EMDE*DT_MACH'. The hypothesis that emotional demands moderates the relationship between psychopathy and OCB is labelled 'EMDE*DT_PSY'. The hypothesis that organisational justice moderates the relationship between emotional demands and CWB is labelled 'OJ*EMDE'. The hypothesis that Machiavellianism moderates the relationship between emotional demands and CWB is labelled 'DT_MACH*EMDE'. The hypothesis that psychopathy moderates the relationship between emotional demands and CBW is labelled 'DT_PSY*EMDE'.
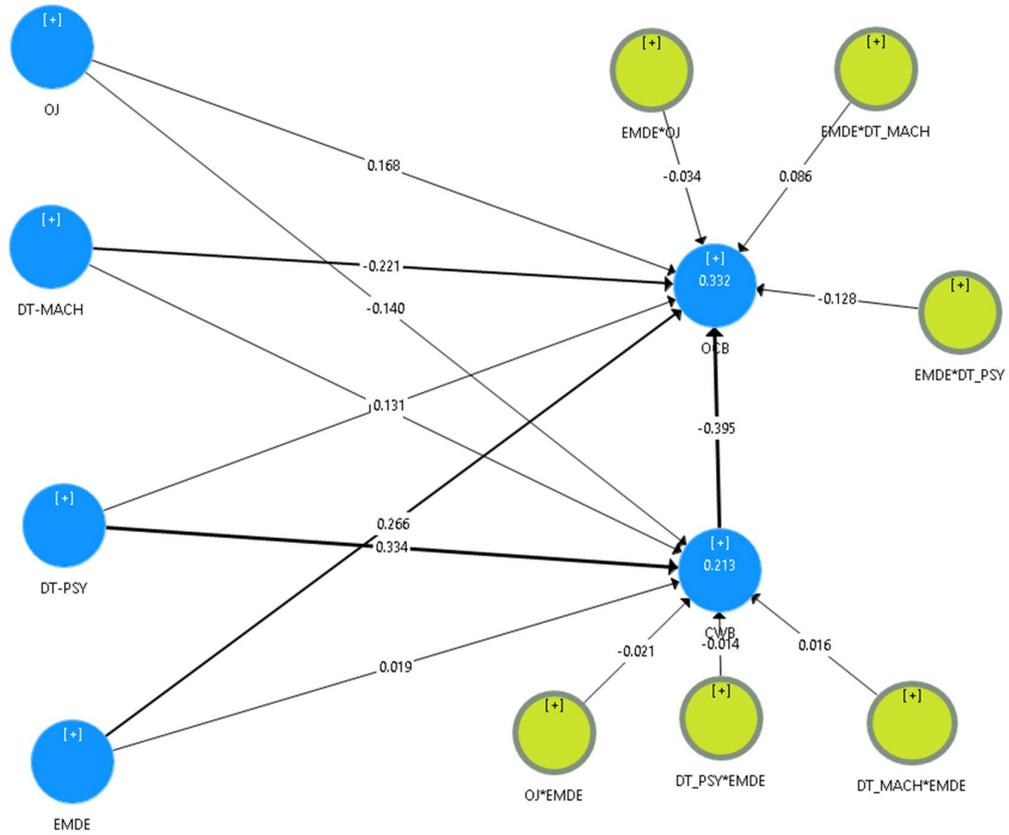
Figure 4.2. PLS model 1
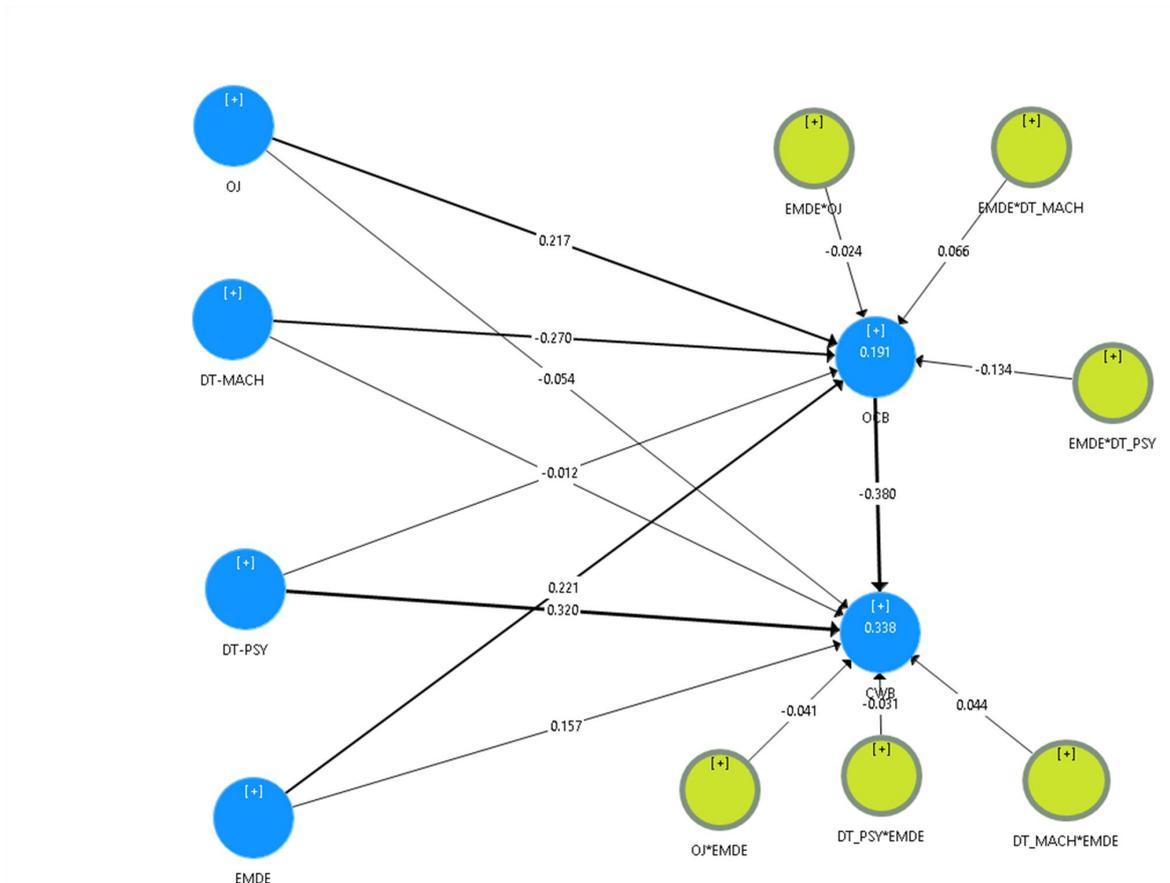
Figure 4.3. PLS model 2

4.3.5.1   *Multicollinearity*

When conducting a regression analysis, it is assumed that the predictors are uncorrelated. If predictors correlate too highly, this can affect the results of the regressions analysis. Therefore, multicollinearity was tested using a VIF (variance inflation factor). VIFs measure the extent to which the coefficients are inflated when compared to a case in which the predictors are not related. This shows the amount of correlation between the predictors during the analysis. When examining VIF results, various cut-off levels are recommended by different research. Hair and colleagues (2011) suggest that a strict cut-off of 5 be used. In this study it was found that all the VIF scores for both models did not exceed the cut-off of 5. Therefore, it was determined that no problems of multicollinearity exist in the models.

4.3.5.2   Evaluation and interpretation of the R-square

The R-square values are used to ascertain how much variance in the constructs is explained by the model. Table 4.6 shows the R-square values for the endogenous latent variables.

Table 4.6

R-square Values for the Endogenous Latent Variable

	R-square for PLS model 1	R-square for PLS model 2
OCB	0.191	0.332
CWB	0.338	0.213

This shows that, in the first model, 34% and 19% of variance in CWB and OCB respectively is explained by the effect of the exogenous latent variables. In the second model, 21% and 33% of variance in CWB and OCB respectively is explained by the effect of the exogenous latent variables. This shows the model does explain some variance in the endogenous latent variables; however, there are still other variables that explain the variance in CWB and OCB.

4.3.5.3   Evaluation and interpretation of the main effects

PLS modelling is used to help facilitate prediction and, as such, is used to test the hypothesised relationships between variables. To examine the significance of the relationships between the variables, the bootstrapping method was used. When using this method, the coefficient will be considered insignificant if zero falls within the 95% confidence interval.

Table 4.7 and Table 4.8 show the results from the analysis and indicate the significance of the path coefficients in PLS model 1 and PLS model 2.

Table 4.7

Path Coefficients Between Variables in PLS Model 1

Path	Path coefficient	95% confidence interval (lower)	95% confidence interval (upper)	Description
H1:OCB→CWB	-0.38	-0.527	-0.193	Significant
H3:OJ→OCB	0.217	0.051	0.359	Significant
H4:MACH→OCB	-0.27	-0.41	-0.065	Significant
H5:PSY→OCB	-0.012	-0.247	0.168	Not significant
H6:ED→CWB	0.157	-0.064	0.33	Not significant

OCB = Organisational citizenship behaviour; CWB = counterproductive workplace behaviour; OJ = organisational justice; ED = emotional demands; PSY = psychopathy ; MACH = Machiavellianism

Table 4.8

Path Coefficients Between Variables in PLS Model 2

Path	Path coefficient	95% confidence interval (lower)	95% confidence interval (upper)	Description
H2:CWB→OCB	-0.395	-0.54	-0.216	Significant
H3:OJ→OCB	0.168	-0.005	0.303	Not significant
H4:MACH→OCB	-0.221	-0.364	-0.017	Significant
H5:PSY→OCB	0.131	-0.136	0.322	Not significant
H6:ED→CWB	0.019	-0.207	0.28	Not significant

OCB = Organisational citizenship behaviour; CWB = counterproductive workplace behaviour; OJ = organisational justice; ED = emotional demands; PSY = psychopathy; MACH = Machiavellianism

Hypothesis 1: OCB (η_1) has a significant positive effect on CWB (η_2).

The hypothesised relationship between OCB and CWB was found to be significant (PLS path coefficient -.38), as zero did not fall within the 95% confidence interval. However, according to the path coefficient, the nature of the relationship is negative, which means that, as the one increases, the other decreases. This follows what most of the literature says about OCB and CWB, although it contradicts the hypothesis in this study and the article on which it is based. This means that the possible relationships detailed by Spector and Fox (2010) for further research are unlikely to be significant in the positive manner they suggest. Alternatively, this positive relationship may only present itself in a very specific set of circumstances. Therefore, any further research

into the positive relationship between OCB and CWB should focus on the possible variables or circumstances that could lead to this type of a relationship.

Thus, it can be concluded that the more one participates in organisational citizenship behaviour, the less likely one is to participate in counterproductive workplace behaviour. The converse can also be true, and it can be concluded that the less one participates in organisational citizenship behaviour, the more likely one is to participate in counterproductive workplace behaviour.

Hypothesis 2: CWB (η_2) has a significant positive effect on OCB (η_1).

The hypothesised relationship between CWB and OCB was found to be significant (PLS path coefficient -.395), as zero did not fall within the 95% confidence interval. However, according to the path coefficient, the nature of the relationship is negative, which means that, as the one increases, the other decreases. This follows what most of the literature says about OCB and CWB, although it contradicts the hypothesis in this study and the article on which it was based, as discussed in relation to hypothesis 1.

Thus, it can be concluded that the more one participates in counterproductive workplace behaviour, the less likely one is to participate in organisational citizenship behaviour. The converse can also be true, and it can be concluded that the less one participates in counterproductive workplace behaviour, the more one is likely to participate in organisational citizenship behaviour.

Hypothesis 3: Organisational justice (ξ_1) has a significant positive effect on OCB (η_1).

The hypothesised relationship between organisational justice and OCB was found to be significant (PLS path coefficient .217), as zero did not fall within the 95% confidence interval in PLS model 1. The relationship also had a positive nature, which is what was suggested by the hypothesis. This relationship mirrors what is found in much of the other research on OCB and organisational justice. However, it should be noted that, in PLS model 2, zero did fall within the 95% confidence interval during the bootstrapping, and as such is not significant. However, when looking at the bootstrapping results, there are two ways to determine significance. One way is to look at the confidence interval, while the other is to look at the P-value (M. Kidd, personal communication, November 2, 2017). When looking at the P-value results for

PLS model 2, it can be seen that the relationship between organisational justice and OCB is statistically significant, with a P-value of .03.[5]

Thus, it can be concluded that, when individuals experience high levels of perceived organisational justice, they are more likely to engage in organisational citizenship behaviour. The converse can also be true, so that when individuals experience low levels of perceived organisational justice, they are less likely to engage in organisational citizenship behaviour.

Hypothesis 4: Machiavellianism (ξ_3) personality trait has a significant positive effect on OCB (η_1).

The hypothesised relationship between Machiavellianism personality trait and OCB was found to be significant (PLS path coefficients -.27 and -.221 for models 1 and 2 respectively), as zero did not fall within the 95% confidence interval. However, according to the path coefficient, the nature of the relationship is negative. This goes against the research, which says that those with high levels of Machiavellianism personality trait will be more likely to engage in OCB as a means of impression management (Becker & O'Hair, 2014).

Thus, it can be concluded that those with high levels of Machiavellianism personality trait are less likely to engage in organisational citizenship behaviour. The converse can also be true, that those with low levels of Machiavellianism personality trait are more likely to engage in organisational citizenship behaviour.

Hypothesis 5: Psychopathy (ξ_2) personality trait has a significant negative effect on OCB (η_1).

The hypothesised relationship between the Machiavellianism personality trait and OCB was found to be not significant (PLS path coefficient of -.012 for model 1 and .131 for model 2), as zero did fall within the 95% confidence interval. Even though the nature of the relationship was negative, as hypothesised, it was not significant. This result shows that the two variables are not related and the levels of a person's psychopathy personality trait has no effect on their engagement in organisational citizenship behaviour.

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[5] It should be noted that a P-value < 0.05 is considered statistically significant at the 95% confidence interval.

However, while not related to a specific hypothesis, the results also show that psychopathy personality trait is in a significant positive relationship (PLS path coefficient of .32 for model 1 and .33 for model 2) with CWB. This could have implications for future research.

Hypothesis 6: Emotional demands (ξ_4) have a significant positive effect on CWB (η_2).

The hypothesised relationship between emotional demands and CWB was found to be not significant (PLS path coefficient of .157 for model 1 and .019 for model 2), as zero did fall within the 95% confidence interval. Even though the nature of the relationship was positive, as hypothesised, it was not significant. This result shows that the two variables are not related, and the levels of a person's perceived emotional demands have no effect on their engagement in counterproductive workplace behaviour.

4.3.5.4   Evaluation and interpretation of the proposed moderating hypotheses

The significances of the moderating effects were tested using two analyses. First, the R-squared change test for interaction was used. This was done by using the independent, moderator and dependent variables to examine whether the R-squared would increase significantly when the interaction effect was included. Table 4.9 provides the change in R-squared and p-values to evaluate whether a moderating relationship exist between the proposed variables. It should be noted that P < .05 is considered significant at a 95% confidence interval.

Secondly, the path coefficients of the moderating relationships were tested in the PLS model to determine their significance and direction. The results are shown in Table 4.10 and Table 4.11 for PLS model 1 and 2 respectively. Again, the significance of a path coefficient depends on the whether zero is present in the upper and lower bootstrapping values. As with the other bootstrapping analyses, this was also done with a 95% confidence interval.

Table 4.9

R-squared Change and P-values for the Moderating Effects

Path	R-squared change	F- to remove	P-vale
ED*OJ→OCB	-0.007	1.23	0.268
ED*MACH→OCB	0.00	0.15	0.7
ED*PSY→OCB	-0.01	0.51	0.48
OJ*ED→CWB	-0.023	4.36	0.038
MACH*ED→CWB	-0.009	1.82	0.179
PSY*ED→CWB	-0.004	0.87	0.351

OCB = Organisational citizenship behaviour; CWB = counterproductive workplace behaviour; OJ = organisational justice; ED = emotional demands; PSY = psychopathy; MACH = Machiavellinism

Table 4.10

Moderating Path Coefficients for PLS Model 1

Path	Path coefficient	95% confidence interval (lower)	95% confidence interval (upper)	Description
ED*OJ→OCB	-0.024	-0.157	0.195	Not significant
ED*MACH→OCB	0.066	-0.295	0.235	Not significant
ED*PSY→OCB	-0.134	-0.305	197	Not significant
OJ*ED→CWB	-0.041	-0.194	0.096	Not significant
MACH*ED→CWB	0.044	-0.143	0.215	Not significant
PSY*ED→CWB	-0.031	-0.24	0.199	Not significant

OCB = Organisational citizenship behaviour; CWB = counterproductive workplace behaviour; OJ = organisational justice; ED = emotional demands; PSY = psychopathy; MACH = Machiavellinism

Table 4.11

Moderating Path Coefficients for PLS Model 2

Path	Path coefficient	95% confidence interval (lower)	95% confidence interval (upper)	Description
ED*OJ→OCB	-0.034	-0.149	0.14	Not significant
ED*MACH→OCB	0.086	-0.232	0.242	Not significant
ED*PSY→OCB	-0.128	-0.314	0.15	Not significant
OJ*ED→CWB	-0.021	-0.207	0.123	Not significant
MACH*ED→CWB	0.016	-0.18	0.22	Not significant
PSY*ED→CWB	-0.014	-0.203	0.247	Not significant

OCB = Organisational citizenship behaviour; CWB = counterproductive workplace behaviour; OJ = organisational justice; ED = emotional demands; PSY = psychopathy; MACH = Machiavellinism

Hypothesis 7: Emotional demands (ξ_4) have a significant negative moderator effect on the relationship between organisational justice (ξ_1) and OCB (η_1).

The P-value of the of the moderation effect of emotional demands between organisational justice and OCB was higher than .05 (P-value of .268). A P-value higher than .05 means that the moderating effect of emotional demands on the relationship between organisational justice and OCB is not statistically significant.

This moderating relationship was tested further in the PLS models using the bootstrapping method. In both PLS models, it was also found that the moderating effect of emotional demands on the relationship between organisational justice and OCB was not statistically significant. The path coefficients were -.027 and -.034 in PLS model 1 and model 2 respectively, with zero falling within the 95% confidence interval. More information on the path coefficients and the confidence interval can be found in Table 4.10 and Table 4.11.

Hypothesis 8: Emotional demands (ξ_4) have a significant positive moderator effect on the relationship between Machiavellianism (ξ_2) personality trait and OCB (η_1).

The P-value of the moderation affect of emotional demands on the relationship between Machiavellianism personality trait and OCB was higher than .05 (P-value of .7). A P-value higher than .05 means that the moderating effect of emotional demands on the relationship between Machiavellianism personality type and OCB is not statistically significant.

This moderating relationship was tested further in the PLS models using the bootstrapping method. In both PLS models it was also found that the moderating effect of emotional demands on the relationship between Machiavellianism personality trait and OCB was not statistically significant. The path coefficients were .066 and .086 in PLS model 1 and model 2 respectively, with zero falling within the 95% confidence interval. More information on the path coefficients and the confidence interval can be found in Table 4.10 and Table 4.11.

Hypothesis 9: Emotional demands (ξ_4) have a significant positive moderator effect on the relationship between psychopathy (ξ_3) personality trait and OCB($\eta1$).

The P-value of the moderation affect of emotional demands on the relationship between psychopathy personality type and OCB was higher than .05 (P-value of .48). A P-value higher than .05 means that the moderating effect of emotional demands on the relationship between psychopathy personality type and OCB is not statistically significant.

This moderating relationship was tested further in the PLS models using the bootstrapping method. In both PLS models it was also found that the moderating effect of emotional demands on the relationship between psychopathy personality type and OCB was not statistically significant. The path coefficients were -.134 and -.128 in PLS model 1 and model 2 respectively, with zero falling within the 95% confidence interval. More information on the path coefficients and the confidence interval can be found in Table 4.10 and Table 4.11.

Hypothesis 10: Organisational justice (ξ_1) has a significant negative moderator effect on the relationship between emotional demands (ξ_4) and CWB (η_2).

The P-value of the moderation affect of organisational justice between emotional demands and CWB was found to be lower than .05 (P-value of .038). A P-value lower than .05 means that the moderating effect of organisational justice on the relationship between emotional demands and CWB is statistically significant.

The nature of organisational justice as a moderator for the relationship between emotional demands and CWB relationship can be seen in Figure 4.4. When organisational justice is low, emotional demands have a greater impact on one's counterproductive workplace behaviour. In contrast, if organisational justice is high, emotional demands have a much less severe impact on one's CWB. Based on Figure 4.4, it can be seen that, when organisational justice is high, the effect of emotional demands on one's CWB stays on a very similar level, despite the increase in emotional demands. In fact, Figure 4.4 shows that one's level of CWB will decrease slightly as emotional demands increase when the level of organisational justice is high. Therefore, it can be concluded that organisations should prefer their organisational justice to be high, as this buffers against the negative effect of emotional demands on

CWB. It should also be noted that this study did not find a main relationship between emotional demands and CWB. Rather, it would seem that emotional demands only have a positive relationship with CWB when there are low levels of organisational justice (moderated by organisational justice). Therefore, this is something that organisations with high emotional demands should consider.
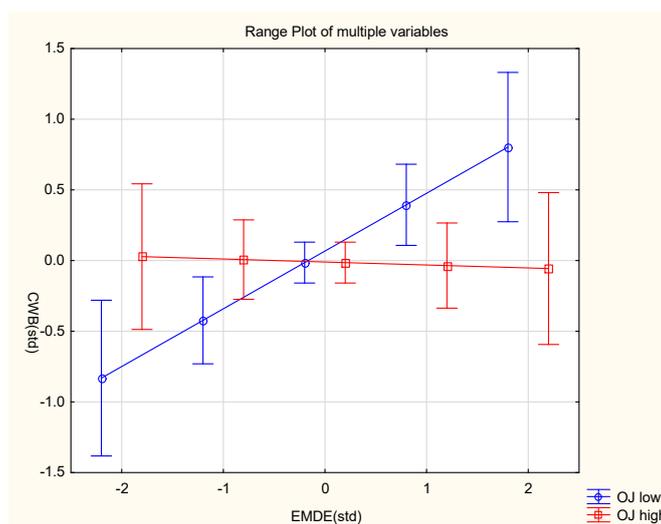

Figure 4.4. The moderating effect of organisational justice on the relationship between emotional demands and CWB

The results of the bootstrapping analysis contradict those discussed above. Rather, when this moderating relationship was tested further in the PLS models, both PLS models found that the moderating effect of organisational justice on the relationship between emotional demands and CWB was not statistically significant. The path coefficient were -.041 and -.021 in PLS model 1 and model 2 respectively, with zero falling within the 95% confidence interval. More information on the path coefficients and the confidence interval can be found in Table 4.10 and Table 4.11.

Hypothesis 11: Machiavellianism (ξ_2) personality trait has a significant positive moderator effect on the relationship between emotional demands (ξ_4) and CWB (η_2).

The P-value of the Machiavellianism personality trait's moderation affect on the relationship between emotional demands and CWB was higher than .05 (P-value of .179). A P-value higher than .05 means that the moderating effect of the Machiavellianism personality type on the relationship between emotional demands and CWB is not statistically significant.

This moderating relationship was tested further in the PLS models using the bootstrapping method. In both PLS models it was also discovered that the moderating effect of Machiavellianism personality type on the relationship between emotional demands and CWB was not statistically significant. The path coefficients were 0.044 and .016 in PLS model 1 and model 2 respectively, with zero falling within the 95% confidence interval. More information on the path coefficients and the confidence interval can be found in Table 4.10 and Table 4.11.

Hypothesis 12: Psychopathy (ξ_3) personality trait has a significant positive moderator effect on the relationship between emotional demands (ξ_4) and CWB (η_2).

The P-value of the moderation affect of psychopathy personality type on the relationship between emotional demands and CWB was higher than .05 (P-value of .351). A P-value higher than .05 means that the moderating effect of psychopathy personality type on the relationship between emotional demands and CWB is not statistically significant.

This moderating relationship was tested further in the PLS models using the bootstrapping method. In both PLS models it was also discovered that the moderating effect of psychopathy personality type on the relationship between emotional demands and CWB was not statistically significant. The path coefficients were -0.031 and -.014 in PLS model 1 and model 2 respectively, with zero falling within the 95% confidence interval. More information on the path coefficients and the confidence interval can be found in Table 4.10 and Table 4.11.

Hypotheses 7 to 12 test the moderating effects as explained in Chapter 2, in which the moderating variables act as buffers against the relationships between the main variables. However, hypotheses 7, 8, 9, 11 and 12 were found to be not statistically significant, and hypothesis 10 was found to be significant when looking at the univariate tests for moderation, but not in the PLS models. There are many possible reasons for these non-significant findings – one may be the small sample size used in this study, or it may be due to the lack of complete reliability in some of the measures. There have also been few to no studies on these specific set of variables and their moderating effects, and as such more research in this area is needed.

4.4   CHAPTER SUMMARY

The purpose of this chapter was to report and discuss the findings of this study. The measurement model was validated using item analysis and PLS modelling. At the item analysis level, all the measures were considered reliable, with some concern over the Short Dark Triad's narcissism personality type. When PLS modelling was used, it was found that the Short Dark Triad's narcissism personality type subsection was too unreliable and it hence was removed from the study. This necessitated the re-drawing of the structural model and the re-writing of the hypotheses based on this new model. The new model was then tested using PLS modelling and it was found that the reliability of the remaining measures was acceptable.

Next, the structural model was fitted and the main and moderating hypotheses were tested. Hypotheses 1, 2, 3, 4 and 10 were found to be statically significant. However, hypotheses 5, 6, 7, 8, 9, 11 and 12 were not found to be statistically significant. The conceptual model was re-drawn based on the results of this study, which can be seen in Figure 4.5.
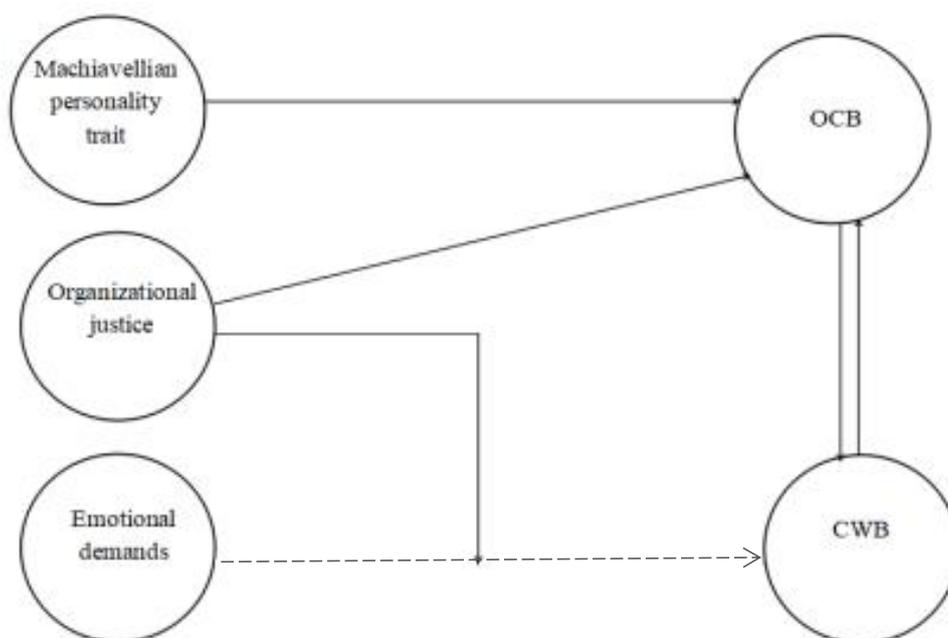

Figure 4.5. Conceptual model based on findings

Chapter 5 will discuss the practical implications based on these results to assist South African industrial psychologists, managers and organisations to address the problems highlighted by the research findings. The limitations of this study will also be discussed, as well as areas for future research.

CHAPTER 5

IMPLICATIONS AND LIMITATIONS OF THE STUDY, AND SUGGESTIONS FOR FUTURE RESEARCH

5.1   INTRODUCTION

This chapter outlines the practical implications for industrial psychologists, organisations and line managers based on the results of this study, based on the findings in Chapter 4. The limitations of this study will also be discussed, along with suggestions for future research.

5.2   REPORTING AND INTERPRETING THE FINAL SCORES

5.2.1   Interpreting the counterproductive work behaviour checklist (CWB-C)

The CWB-C was used to assess the amount of counterproductive workplace behaviour respondents were engaging in. The CWB-C is 45 items long and the questions are answered using a five-point Likert scale (1 = never to 5 = every day).

The literature does not provide any specific instructions on how to interpret this scale. However, the total mean score was 1.5, which indicates that most respondents have either never or only once or twice participated in CWB at their current job.

5.2.2   Interpreting Lee and Allen's organisational citizenship behaviour scale

Lee and Allen's (2002) OCB scale was used to assess the amount of OCB being engaged in by the respondents. This measure is scored on a seven-point Likert scale (1 = never to 7 = always). The literature does not provide any specific instructions on how to interpret this scale. However, the total mean score was 5.7, which indicates that most participants reported participating in OCB occasionally or very frequently. This is a positive result for the organisations that participated in the study, as it implies that most people are participating in some form of OCB while at work. Again, it should be noted that it is possible that certain biases, for example an impression-management bias, could partially be responsible for these results. However, in general, most respondents reported to participate in some form of OCB.

5.2.3   Interpreting Colquitt's organisational justice scale

Colquitt's (2001) organisational justice scale was used to measure the perceived amount of organisational justice in the various participating organisations. This measure is scored on a five-point Likert scale (1 = to a small extent to 5 = to a large extent) and the literature does not provide any specific instructions on how to interpret this scale. The total mean score was 3.4, and the standard deviation SD was 0.76, which indicates a wide spread of answers around this mean. In general, the total score shows a neutral response. This indicates that the respondents did not perceive high or low levels of organisational justice and implies that the participating organisations do not suffer from low levels of organisational justice, but neither do they have high levels of organisational justice. Therefore, there is a practical implication for these organisations, as their levels of organisational justice can be improved. Why this is necessary, as well as how to do this, is discussed later in this chapter.

5.2.4   Interpreting the Emotional Demands and Emotion-rule Dissonance Scale

The Emotional Demands and Emotion-rule Dissonance Scale was used to measure the emotional demands experienced by the participants in the study. This measure is scored on a five-point Likert scale (1 = never to 5 = always) and the literature does not provide any specific instructions on how to interpret this scale. The total mean score was 3.14. This indicates that the respondents experience neutral levels of emotional demands, and implies that the respondents, on average, do not experience high or low levels of emotional demands. However, it should also be noted that people might have selected the neutral option due to reasons, for example not understanding the question or having a lack of emotional intelligence. In general, these results imply that the respondents were not experiencing any high or low emotional demands as a result of their work.

5.2.5   Interpreting the Short Dark Triad 3.1

The SD3.1 was used to measure the levels of the three dark personality traits captured in this measure. As stated in Chapter 4, due to its psychometric instability, the narcissism personality trait subsection of the measure was excluded. Therefore, the results from the two remaining subsections were interpreted. As the subsections were

used separately in the testing of the model, the results of each subsection are discussed separately.

5.2.5.1   Interpreting the Machiavellian personality trait subsection

The Machiavellianism personality trait subsection was used to measure the levels of the respondents' sub-clinical Machiavellianism personality trait. This measure is scored on a five-point Likert scale (1 = strongly disagree to 5 = strongly agree), and the literature does not provide any specific instructions on how to interpret this scale. The total mean score was 2.59. This shows that most respondents disagreed with the items in the measure, which implies that, in general, the respondents had low levels of Machiavellianism personality trait.

5.2.5.2   Interpreting the psychopathy personality trait subsection

The psychopathy personality trait subsection was used to measure the levels of the respondents' sub-clinical psychopathy personality traits. This measure is scored on a five-point Likert scale (1 = strongly disagree to 5 = strongly agree) and the literature does not provide any specific instructions on how to interpret this scale. The total mean score was 1.88. This shows that most respondents strongly disagreed to disagreed with the items in the measure. This implies that, in general, the respondents had very low levels of psychopathy personality trait.

Overall, the interpretation of the average results from the measures used in this study implies that the various organisations that participated in this study were not in immediate need of remedial measures; the results rather paint a picture of fairly healthy organisations when considering the variables considered in the present study. However, what these results do show is that the general levels of organisational justice, while not low, are not high either. This implies that there is an area that could be improved in these various organisations to improve the level of OCB as well as further lower the level of CWB. These practical implications for these organisations, as well as for South African organisations in general, will be discussed further in this chapter based on the results of the current study.

5.3 PRACTICAL IMPLICATIONS

The relationships that were discovered in this study, as well as the variance in OCB and CWB that is explained by the PLS structural models tested, have practical use for South African organisations. The information gained from this study can be used in practical ways to remedy problems of CWB or encourage OCB.

As previously discussed, CWB and OCB are forms of discretionary workplace behaviour that make up part of an employee's performance. Any organisation should do its best to maximise positive employee performance to create a competitive advantage for the organisation. Therefore, from a practical standpoint, it is important to address how an organisation would leverage these aspects of employee performance to the advantage of the organisation and its employees. As OCB is considered a positive aspect of job performance and OCB a negative one, the focus should therefore be on how to increase OCB while decreasing CWB to best enhance employee performance.

As OCB and CWB are explained in the JD-R framework in this study, it is also important to consider how this framework could be useful when examining the practical implications. Previous research on and practical use of the JD-R have focused on ways to increase job resources while decreasing job demands, which will ultimately help the motivational process while hindering the ill-health process (Bakker & Demerouti, 2014). Therefore, specific practical implications that target an increase in OCB and decrease in CWB via the targeting of the variables positioned as job demands and job resources were examined.

5.3.1 Specific interventions based on the results of this study

Based on the final results and the subsequent understanding of the relationships among the variables, the variable of most interest is that of organisational justice. Organisational justice is of such importance because it has a direct positive effect on OCB, as well as a moderating effect on the relationship between emotional demands and CWB. As such, it would be important to ensure that there are high levels of perceived organisational justice, as this can lead to more OCB. Although emotional demands did not have a direct relationship with CWB, it was found that, when organisational justice was low, CWB increased when emotional demands increased.

Therefore, it would be important to ensure that organisational justice is not low so that this interaction effect does not take place. As there is no direct relationship, there are few to no positive outcomes for an organisation to address emotional demands; rather, addressing organisational justice will ensure higher OCB while also ensuring that the interaction affect does not take place.

Another variable of importance gained from the results of the present study is that of the Machiavellianism personality trait. The Machiavellianism personality trait is in a direct negative relationship with OCB and, as such, it should be addressed to ensure that it is not affecting an organisation's levels of OCB.

Lastly, it can be seen that OCB and CWB are in a direct negative relationship with one another. Therefore, any action taken to affect one of these in an organisation will affect the other. Any actions taken to increase OCB therefore should also lead to a decrease in CWB. This again points to the importance of organisational justice, as any interventions implemented to increase organisational justice with the intention of increasing OCB will also, therefore, decrease the level of CWB as OCB increases.

However, it again should be noted that OCB can have negative personal outcomes for individuals who participate in it (Deery et al., 2016). It consequently is important that organisations consider the supportive interventions they can implement, should they also be implementing interventions to increase OCB. For example, work-life conflict can result from high participation in OCB (Deery et al., 2016). Therefore, supportive interventions should also be implemented to ensure that employees have organisational support that will help them avoid these negative consequences. Work-life balance interventions, such as flexi-time, three-day work weeks or creches on site, should be considered to help support employees who may suffer the negative consequences of engaging in too much OCB.

5.3.1.1   *Interventions to increase organisational justice*

Ensuring high levels of organisational justice will not only help ensure high levels of OCB and consequently lower levels of CWB, but also will help increase other positive outcomes linked to organisational justice. Organisational justice has been linked to job satisfaction, organisational commitment (Cohen-Charash & Spector, 2001) and well-being (Kivimäki et al., 2004). Thus, the positive outcomes for an

organisation will be greater than simply increasing OCB. Addressing organisational justice in an organisation could have many positive outcomes for an organisation and therefore is worth considering in all organisations.

As discussed in Chapter 2, there are three sub-categories that make up organisational justice, namely distributive justice, procedural justice and interactional justice, which is further broken down into informational and interpersonal justice (Colquitt, 2001). The practical interventions that can be used to increase perceptions of organisational justice should be aimed at these three types of organisational justice.

5.3.1.1.1   *Interventions aimed at distributive justice*

As previously discussed, distributive justice is a person's evaluation of their input versus the output, or rewards, they receive for it (Adams, 1963). It is not feasible to suggest that organisations simply pay their staff more, as this could be too costly for organisations and might not be very effective, as money stops being a motivator above a certain amount. Rather, there are more cost-effective and useful ways to increase perceived distributive justice.

One way to do this it to ensure that the dual strategic goals of the reward system are properly balanced. It has been suggested that the strategic goals of the rewards system are to both motivate employees as well as maintain group cohesion (Cropanzano, Bowen, & Gilliland, 2007). However, balancing these goals is difficult, as individual rewards for effort promote individual performance and can also lead to perceptions of distributive inequality (Cropanzano et al., 2007). This could also lead to less cohesion in the group as competition for the rewards increases. However, paying everyone the same is also not the answer, as this leads to low individual motivation and loss of talent (Cropanzano et al., 2007). The answer is to balance these two goals. This could be done by implementing a basic salary that is the same for all employees, combined with performance-based rewards (Cropanzano et al., 2007). In this way, individuals receive the same equitable basic salary, and their own input will determine the output that they receive. However, perceptions of procedural justice are of importance here, because if an employee believes that the procedure for the rewards is unjust, then their effort will not result in a balanced output.

Other ways to ensure distributive justice is to ensure that employees are satisfied with the reward system. This can be achieved by using different types of rewards so that all employees gain satisfaction from their rewards (Cropanzano et al., 2007). The use of different types of rewards will ensure that most employees are satisfied with the outputs they receive for their input. Thus, to ensure distributive justice in an organisation, it is necessary to carefully consider the rewards system and to ensure that its goals are properly balanced to ensure maximum individual motivation without compromising group cohesion, as well as ensure that the outputs the employees receive are what they want.

5.3.1.1.2 *Interventions aimed at procedural justice*

Procedural justice is the fairness and consistency of the procedures used to determine an employee's outcomes (Lind & Tyler, 1988, as cited in Cohen-Charash & Spector, 2001). For a procedure to be fair, it needs to be applied consistently, the information used has to be accurate, it must be unbiased, there has to be room for appeal, and all employees' needs and values should to be taken into account (Leventhal, 1980, as cited in Cohen-Charash & Spector, 2001). There are many procedural areas in an organisation that can lead to perceptions of injustice and, as such, all of these should be considered carefully.

One such procedure is the selection procedure. The selection procedure is an employee's first introduction to the organisation, and how an employee is treated can have consequences later on (Cropanzano et al., 2007). Therefore, it is important that this procedure be perceived as just. This can be done by ensuring that appropriate questions and criteria are used, and that there are enough opportunities for the applicant to perform (Cropanzano et al., 2007). Interactional justice is also important in this procedure, as applicants often do not understand the procedure or why they are or are not chosen. Applicants should be given honest and timely feedback after the interview, as well as information on the procedure and the expectations of the interviewers (Cropanzano et al., 2007).

Another procedure that is of importance when aiming to increase procedural justice is that of the reward system. To ensure that an employee perceives the reward system as fair, the procedures that lead to the outcomes employees receive should be fair. This can be done by ensuring that all employees are subject to the same system, and that a

certain amount of input will always lead to a certain outcome, thus consistency is important (Cropanzano et al., 2007). Another way is to ensure that the performance appraisal system and the reward system are properly linked, and that the performance appraisal system is perceived as just.

The performance appraisal system is of importance because it is the organisation's measure of the employees' input, which can have direct results on an employee's outputs (for example promotions, bonuses, demotions or personal rewards for performance). To ensure the performance appraisal system is perceived as procedurally fair, employees should be given a fair chance to showcase their performance. This can be achieved in three ways: adequate notice, a just hearing and judgements based on evidence.

Antiquate notice includes informing employee in advance that their performance will be evaluated as well as informing them about which criteria will be examined (Cropanzano et al., 2007). Employees could also be responsible for helping set their own performance goals, which will increase their perception of justice in the procedure, as they have input in the process (Cropanzano et al., 2007).

A just hearing means focusing on evidence and information that is related to performance standards and the set criteria and standards, rather than focusing on personal attacks (Cropanzano et al., 2007). This will ensure that employees feel that the process is just, as it focuses on their performance and not on their personality or personal relationship with their reviewer.

Judgements based on evidence mean that the standards should be accurate and job related, that data is collected based on these standards, and that decisions are then based on this procedure (Cropanzano et al., 2007). This will help ensure that the standards set for job performance are known and considered just, and the decisions made surrounding employee outcomes are based on this fair procedure. Ensuring that adequate notice, fair hearing and judgements based on evidence are present in the appraisal system will ensure that there are perceptions of procedural justice surrounding the performance appraisal system.

To ensure procedural justice in an organisation, other procedures, such as the conflict management system, discipline system and the management of organisational change, should all be consistent and fair. It is important that information regarding these areas

is disseminated throughout the organisation, and should any of these systems be used, that they be applied fairly to all employees (Cropanzano et al., 2007).

Therefore, to ensure that the procedures in an organisation are considered just, it is important to consider all the organisation's procedural systems, disseminate information about these systems, and ensure that these procedures are applied fairly at all levels and for all employees. As discussed, the dissemination of information is very important, as well as the way in which leaders manage these processes and employees; this points to the importance of interactional justice.

5.3.1.1.3   Interventions aimed at interactional justice

Interactional justice can be further separated into informational and interpersonal justice, where informational justice is achieved through sharing information and interpersonal justice is achieved by showing people respect and dignity (Cropanzano et al., 2007). As discussed, it is important to disseminate information about all of the procedures in the organisation. This is especially important when these procedures have consequences for employees, for example when the organisation is downsizing and there are layoffs (Cropanzano et al., 2007). Therefore, offering truthful and adequate information will ensure that there is informational justice surrounding these procedures.

Interpersonal justice is also important, as it is based on the way that managers, leaders and other authority figures treat their subordinates. Thus, it is important that leaders are aware of the importance of interpersonal justice and treat their subordinates accordingly. Leaders can be trained in all aspects of organisational justice so that their actions are aimed at helping promote perceptions of organisational justice. Studies have shown that training a leader in organisational justice can lead to an increase in perceptions about fairness, and this ultimately leads to an increase in OCB (Skarlicki & Latham, 1996). Other research has shown that transformational leadership can increase perceptions of procedural justice, trust and ultimately OCB (Engelbrecht & Chamberlain, 2005). Thus, to increase the levels of perceived organisational justice in an organisation, leaders can be trained in ways to increase organisational justice or, alternately, trained to be transformational leaders. This could also be influenced during the selection of leaders, by ensuring that either leaders with a transformational style are selected, or leaders who engage in interpersonal justice are selected. The

issue of selection is also of importance when considering the direct relationship between the Machiavellianism personality trait and OCB and, as such, it should be addressed to ensure that it does not affect an organisation's levels of OCB.

5.3.1.2   *Interventions to decrease levels of the Machiavellianism personality trait*

The Machiavellianism personality trait is in a direct negative relationship with OCB and, as such, it would be in an organisation's best interest to ensure that the levels of Machiavellianism personality trait in their employees are kept to a minimum. As personality is not a very malleable variable, the best way to do this would be at the point of selection. Organisations could consider adding a measure of Machiavellianism personality trait to their selection battery.

However, it should be noted that the Machiavellianism personality trait subsection of the SD3.1 cannot be used for selection as it is currently. Before a test can be used it has to be shown to be reliable, valid, fair and unbiased (Republic of South Africa (RSA), 1998). This means that the test itself has to meet these criteria, as well as demonstrate the reliable, valid, fair and unbiased use of the test for selection purposes. When selecting personnel, the actual applicant performance (η) is not available, therefore the logic underlying selection is that substitute (x) information is used to make inferences about predicted performance, $\hat{Y}$, given that Y is a valid, reliable, fair and unbiased measure of performance. Therefore, inferences are made from X to $\hat{Y}$ and, as such, it is important that the inferences made about $\hat{Y}$ based on X are valid (Binning & Barrett, 1989). This means the reliability, validity, fairness and unbiasedness of the inferences are as important as the reliability, validity, fairness and unbiasedness of the test itself.

This is an important concept to understand, because it is related to the unfair, indirect discrimination that any organisation wants to protect itself from in its selection process. Therefore, before a measure of Machiavellianism personality trait can be added to a selection battery, it needs to be tested to ensure that is in fact a reliable, valid, fair and unbiased predictor of job performance, or in this case the positive discretionary aspect of job performance that is OCB. Consequently, there is a practical implication for organisations in selecting those with low levels of Machiavellianism personality trait; however, a measure has to undergo proper psychometric testing before it can be used legally for selection purposes in South

Africa, as discussed. The cost to a single organisation could be too high to undertake such testing, and therefore the practical process lies more with industrial psychologists or test developers who have an interest in creating a commercially available test of Machiavellianism personality trait that can be purchased by interested organisations.

Implementing a selection-based approach ignores the problem of existing employees in an organisation, who may have high levels of Machiavellianism personality trait. Personality is a relatively non-malleable trait. Therefore, it is important that, should high levels of Machiavellianism personality trait lead to low levels of OCB and eventually high levels of CWB, organisations will be equipped to deal with this behaviour. This often means that organisations should ensure they have disciplinary systems in place, that these are communicated to all employees, and should any negative behaviour be discovered, the procedures be followed fairly and consistently.

It should be noted, however, that past research has shown that individuals demonstrating high levels of dark triad personality traits were less likely to engage in CWB when there were high levels of perceived support (Palmer, Komarraju, Carter, & Karau, 2017). Therefore, to ensure that those in an organisation with high levels of Machiavellianism personality trait are less likely to participate in CWB, an organisation should ensure that there are high levels of organisational support. Positive organisational support (POS) is the extent to which an employee believes that an organisation values his/her contribution and cares about his/her well-being (Eisenberger, Huntington, Hutchison, & Sowa, 1986, as cited in Palmer et al., 2017). Therefore, should organisations have high levels of Machiavellianism personality trait, which will lead to low levels of OCB and thus high levels of CWB, they could ensure they have high levels of POS. This could help reduce the likelihood of those with high Machiavellianism personality trait responding with CWB. This is a very tentative suggestion, however, as the mechanisms behind the OCB and CWB relationship were not explored in this study, and the previous research on which the suggestion is based was conducted on a direct relationship between Machiavellianism personality trait and CWB.

5.4   LIMITATIONS OF THE STUDY AND RECOMMENDATIONS FOR FUTURE RESEARCH

Despite the discoveries made in this study and the careful manner in which it was conducted, the study has several issues that limit it. These limitations do not necessarily subvert the results discussed in Chapter 4; however, it is important to note the areas in which the study could improve, and thus provide recommendations for future research.

The first limitation is that of the sample. The sample size was quite small. While a sample of 179 was adequate to be able to perform the statistical analyses, a larger sample size would have given the results more statistical power and thus given the results and the study more credibility. One of the elements that may have contributed to the small sample size was that the survey was delivered to the work emails of the possible participants, and they may not have had time during work to complete the survey. The small sample size, combined with the complexity of the structural model, also limits the power of the statistical analyses and this could have resulted in the absence of significant relationships between the variables. Therefore, it is recommended that, in future research, a larger and more representative sample of the working South African population be procured.

The second limitation is the non-representativeness of this sample. The sample used for this study was mostly from the Gauteng and Western Cape provinces, and from a few selected organisations that agreed to take place in this study. This sample cannot be said to be representative of the whole South African working population, and thus a question about the generalisability of these results arises, as well as the validity of inferences made about the South African working population based on these results. The use of a larger, stratified sample of the population would help create a representative sample. Therefore, it is recommended that a more representative sample be procured for study in future research.

The third limitation is that the study used self-report data that was collected via an online questionnaire. A concern linked to self-report measures is method bias, for example impression management. It should also be noted that self-selection bias could create method bias, as there is a possibility that those who opt to participate in the survey have certain characteristics that then influence the results of the study.

Therefore, it is advised that objective measures of the variables be used to measure the latent variables in future research.

The fourth limitation is based on the confidentiality of the self-administered web-based survey. While confidentiality was assured, the participants may have mistrusted this and not answered the question with full candour. This is a large concern when CWB is a variable that is being studied, as the participants may impression-manage their answers if they assume their employers could have access to the results. This could have affected the accuracy of the responses given, and thus the results.

The fifth limitation is that of a lack of measurement accuracy. As stated in Chapter 4, the narcissism personality type subsection of the SD3.1 was found to be unreliable and, after an investigation into the measure, it was removed from the measurement model. This means that the structural model as initially hypothesised could not be tested. As a result, the structural model was re-drawn and the hypotheses were re-written, as there was a lack of measurement accuracy that resulted in the eventual removal of the measure. This meant that the variable of narcissism could not be tested in the model, although it could have important direct and moderator relationships that could not be tested. Therefore, it is advised that, in future research, either a reliable measure of narcissism be used or, alternatively, that the current measure be investigated, re-written and tested for reliability and validity before being used.

Furthermore, some of the items in the measures were negatively scored. Negatively scored items are known to influence the reliability of a scale (Gorgens-Eckermans & Herbert, 2013). In this study, the negativity scored items of the psychopathy SD3.1 sub-scale had non-significant loading in the measurement model when bootstrapping was performed. Therefore, it is recommended that these items be examined and possibly re-written as positively scored items in future research. In addition, while in general it had satisfactory reliability, the measure used to measure emotional demands had non-significant loadings in the PLS measurement model when the bootstrapping was conducted. Thus, in future research, it is recommended that either a different measure of emotional demands be used or, alternatively, that this measure be investigated, re-written and tested for reliability and validity before being used.

The sixth limitation is that, although the R-square values reported in the PLS model were satisfactory (.183 to .338 in the first model and .324 to .213 in the second), it is highly likely that there are other important variables that explain the variance in CWB and OCB. There are many other organisational and personal variables that could influence OCB and CWB. Therefore, it is recommended that, in future research, the structural model be expanded and more variables tested within the framework of the current CWB and OCB model.

The seventh limitation is based on the use of the *ex post facto* research design. The utilisation of this type of design means the researcher cannot manipulate the independent variables, and thus the researcher could not randomise the participants. The nature of the research necessitates this type of design. Future research could try to use a different design that allows for randomisation.

The eighth and final limitation is that this cross-sectional research study only took a single picture of the studied phenomenon. To enhance the consistency and accuracy of the results, it is suggested that a longitudinal study be conducted. This would allow the researcher to draw more causal inferences and be able to identify recurring behavioural patterns in employees over time.

5.5   CHAPTER SUMMARY

This chapter provided practical suggestions based on the results of this study. The recommended practical implications for the finding of this research consist of ways to increase the perceived amount of organisational justice as a method to increase OCB and ultimately lower CWB, and the selection implications for those with high Machiavellianism personality trait. This chapter also included the limitations of the current study and their corresponding implications for future research.

5.6   CONCLUSION

The primary focus of this study was to answer the research initiation question; why is there variance in CWB and OCB in the workplace. This led to the testing of the structural model that was constructed based on the hypothesised direct and moderating relationships between the variables of interest. The researcher also aimed to provide practical suggestions based on the results of the study that would be of

practical use to South African organisations and South African industrial psychologists. Reflecting on the study, it can be concluded that it met its objectives of:

a. developing a conceptual model that depicts the complex dynamics of the most salient variables/psychological processes proposed to explain variance in CWB and OCB in the workplace; and

b. determining the strength of the influence of these salient variables on CWB and OCB in the workplace; thus, to test the fit of the proposed model and to assess the significance of the different hypothesised paths.

From the 12 hypotheses tested in this study, five were found to be statistically significant, namely hypotheses 1, 2, 3, 4 and 10. A conceptual model was drawn based on these results (see Figure 4.5). This research has also contributed to a more comprehensive understanding of the variables that were studied, namely OCB, CWB, organisational justice, emotional demands and the dark triad. This research has provided insight into which variables have relationships with CWB and OCB, and thus the results obtained from this study can be used in a practical manner to leverage the variables that affect OCB and CWB. In conclusion, these findings provide insight into the nature of these variables, their direct and moderating relationships and their consequential practical implications for other researchers, managers, organisations and industrial psychologists.

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