

Author Accepted Manuscript

[Accepted by the International Journal of Human Resource Management]

Reference Number: 1745 @ 28th October 2008

TITLE: Counterproductive Behaviour at Work: An Investigation into Reduction Strategies in Thailand

AUTHORS: Kirk Chang & Chuchai Smithikrai

Correspondence email: Kirk.Chang@gmail.com

ABSTRACT

The present study examined the interrelation of personality characteristics, organizational justice, organizational citizenship behaviour (OCB), and counterproductive work behaviour (CWB). An anonymous questionnaire survey was conducted, with 1,662 participants representing a wide variety of jobs across heterogeneous organizations in Thailand. Statistical analysis indicated that CWB can be predicted by the following personality characteristics; *conscientiousness*, *agreeableness*, *self-esteem*, *extraversion*, *neuroticism*, and *openness to experience*. Moderation analysis discovered that the association between personality characteristics and CWB is moderated by three factors; *distributive justice*, *interactional justice*, and *OCB*. Structural Equation Modelling was adopted in order to examine the efficacy of the identified moderators, and revealed that *interactional justice* has the strongest moderating effect, followed by *distributive justice* and finally *OCB*. Implications of the findings to organizational management and personnel practitioners are discussed accordingly, including; that the occurrence of CWB could be reduced through the implementation of organizational justice enhancement policies; and that the prevalence of OCB atmosphere at work could also help alleviate the impact of personality characteristics on CWB.

KEYWORDS: Counterproductive Work Behaviour, Organizational Citizenship Behaviour.

INTRODUCTION

Counterproductive Work Behaviour (CWB) is commonly defined as voluntary or intentional behaviour that acts against the interests of the organisation. CWB has found itself to be the focus of extensive research recently due to the pervasive and costly consequence of such behaviours which affects both the organizations and their employees. Contemporary studies have revealed subtle interrelations between employees' deviant work behaviours and their individual characteristics, such as the *Big-Five* personality traits, locus of control and self-esteem (Dalal, 2005; Mount, Ilies, & Johnson, 2006; Smithikrai, in press). While the findings of these studies are valuable and informative, verifying that certain personality characteristics are more likely to elicit CWB, the practical application of these findings is compromised for the following reasons. Firstly, Pervin and John (2004) claimed that personality characteristics may be relatively stable and hard to manipulate, which leaves little space left for managers to intervene on the influence of such personality traits on CWB (*This paper recognizes the drawback of Pervin and John's viewpoint and will discuss its influences at a later stage*). Secondly, due to the prevalence of equal opportunity policies, the exclusion of individuals based on personality traits identified during recruitment is controversial.

It is for this reason that the current study does not intend to develop tests with the objectives of identifying those prospective employees with personality characteristics that indicate the potential to engage in CWB. Rather, the aim of this study is to examine whether the relationships between personality characteristics and CWB are affected by other variables. The findings will have implications for the management of CWB, potentially developing ways to help organizational leaders and managerial practitioners to alleviate the effect of personality characteristics on CWB, reduce the occurrence of CWB, and contribute to overall organizational performance.

The Nature of Counterproductive Work Behaviour

CWB are a class of behaviours that act against the interests of the organization, which individuals, usually, consciously choose to engage in. Examples of CWB may include playing cruel

pranks, bullying/swearing at colleagues, falsifying expense reports, sabotaging others' work, and even theft. The common theme throughout these behaviours is that they are harmful to the organization, either by directly affecting its property or ability to function, or by hurting its employees in such a way that reduces their effectiveness.

There is no doubt that CWBs violate organizational norms, are detrimental to the interests of the organization, and hinder the attainment of organizational overall goals. CWBs have been described as deviance (Robinson & Bennett, 1995), antisocial behaviour (Giacalone, Riordan, & Rosenfeld, 1997), unruliness (Hunt, 1996), destructive and hazardous behaviours (Murphy, 1993), and have been shown to be pervasive and costly both to organizations and to employees' well being.

For example, 58% of women reported experiencing potentially harassing behaviours and 24% reported having experienced sexual harassment at work (Ilies, Hauserman, Schwochau, & Stibal, 2003). According to the American Management Association (2005), approximately 25% of companies have fired employees for misuse of the Internet. Moreover, 95% of organizations find themselves the targets of employee theft and fraud (Case, 2000).

These behaviours cost U.S. businesses approximately \$50 billion annually, and may account for as many as 20% of failed businesses (Coffin, 2003). Although more difficult to quantify, the negative psychological impact of workplace deviance can translate into reduced employee morale, higher rates of absenteeism and turnover, and lower productivity (Hoel, Einarsen, & Cooper, 2003).

The dimensionality of CWB is still debated by experts; however, for the purposes of measurement, the current study uses a two-dimensional model that has received empirical support (Robinson & Bennett, 1995; Gruys & Sackett, 2003) and distinguishes between individual- and organization-targeted CWBs. Although CWBs can also be analyzed using other dimensions (e.g., task relevance and severity; Bennett & Robin, 2000), the interpersonal-organizational dimensions have consistently emerged in recent conceptual and empirical work on CWB, and appears to be the most relevant for analyses aimed at expounding the processes through which personality influences CWBs.

CWB and Personality Characteristics

One of the long held goals of managerial science has been to establish a model that can suitably describe human personality characteristics and predict their effects on behaviours at work. There are currently a handful of models have risen to prominence, though some models are more widely accepted than others, whereas support for others seems to come and go in cycles (McCrae et al., 2005). One of the more prominent models in managerial science is the Five-Factor Model of personality (*FFM*: McCrae & Costa, 1997), which incorporates five different variables into a conceptual model for describing personality.

Specifically, the FFM dimensions are *neuroticism*, *extraversion*, *openness to experience*, *agreeableness*, and *conscientiousness*. Neuroticism refers generally to a lack of positive psychological adjustment and emotional stability. Extraversion is characterized by a keen interest in other people and external events, and venturing forth with confidence into the unknown. Openness to experience refers to the degree to which an individual is open to new experiences/new ways of doing things. Agreeableness refers to how compatible people are with others, or how able they are to get along with others. Conscientiousness describes socially prescribed impulse control that facilitates task and goal directed behaviour, such as thinking before acting, delaying gratification, following norms and rules, and planning, organizing, and prioritizing tasks (McCrae & Costa, 1997; Smithikrai, 2007)

Since the 1990s, research examining the link between personality and work behaviour has intensified. The FFM dimensions have been replicated in a variety of studies across countries and cultures and remain fairly stable over time (McCrae et al., 2005). Studies have indicated that conscientiousness was the most relevant of the personality factors which predict job performance, both in Western context (e.g., Mount & Barrick, 1995; Salgado, 1997) and in Asian context (e.g., Smithikrai, 2007). The FFM of personality has also been studied as a predictor of CWB; for example, conscientiousness has been found to be the strongest predictor of CWB (Dalal, 2005; Hough, 1992; Salgado, 2002).

A meta-analysis by Berry et al. (2007) found that CWB-I (individual targeted) and CWB-O (organization-targeted) are moderately correlated with agreeableness, conscientiousness, and emotional stability than with extraversion or openness to experience (See Footnote 1). Agreeableness is strongly correlated with CWB-I, and conscientiousness are strongly correlated with CWB-O. Consistent with the western findings, Smithikrai (in press) found that agreeableness and conscientiousness are the two attributes that exert significant effects on CWB in Thai population. In addition, individuals with low self-esteem may also be related with higher occurrence of CWB. In a similar vein, Lin (2005) argues that individuals with low self-esteem usually respond negatively to comments (or criticizes) different from their own. Their behaviour may upset themselves and increase dissatisfaction with their job, which then triggers the notion of counterproductive behaviour at work (Lin, 2005). In view of these empirical findings, this paper infers that personality characteristics play a crucial role in determining CWB.

CWB and Organizational Justice

Organizational justice is concerned with individual perceptions of fairness and justice treatment in the workplace. Organizational justice has been well-studied in the field of management and there are three forms of justice that are widely discussed; *distributive justice*, *procedural justice*, and *interactional justice*.

According to Cohen-Charash and Spector (2001), the study of fairness in management commenced with Adams' (1965) work on equity theory, which emphasize the perceived fairness of outcomes (i.e., distributive fairness). *Distributive justice* refers to people's perceptions of the fairness of the outcomes they receive relative to their contributions and to the outcomes and contributions of others. Following the inability of equity theory and other distributive justice models to completely explain and predict peoples' reactions to perceived injustice, the focus of research moved on to procedural justice (see Cropanzano & Randall, 1993, for a historical review).

The study of procedural justice extended from the study of distributive justice because findings showed that the distribution of rewards was not always as important as the process by which they were allocated (Lind & Tyler, 1988). *Procedural justice* involves people's perceptions of the fairness of the processes by which outcomes are reached.

However, during this time another conceptualization of organisational justice emerged; *interactional justice*. According to Bies and Moag (1986), interactional justice focuses on the interpersonal side of organizational practices; specifically, the interpersonal treatment and communication by management to employees.

Empirical studies have attempted to link justice perceptions with CWBs, with empirical investigations revealing that employees may respond to perceptions of unfair treatment with negative emotions, such as anger, outrage, resentment, and desire for retribution (Folger, 1993; Skarlicki & Folger, 1997). The perception of organizational injustice may also have a subtle impact on organizational dynamics, which would then trigger a range of direct and indirect behavioural responses such as theft (Greenberg, 1990), vandalism, sabotage, reduction of citizenship, behaviours, withdrawal, and resistance to changes (Jermier, Knights, & Nord, 1994). Skarlicki, Folger, and Tesluk (1999) discovered that the relationship between perceived injustice and organizational retaliatory behaviour (ORB), or CWB, is moderated by personality factors such as negative affectivity and agreeableness.

The aforementioned discussion of personality and CWB imply that employees who pose certain personality traits are more likely to demonstrate CWBs. Based on previous research on organizational justice, the current study assumes that, when organizational injustice is present, employees will demonstrate more CWBs. In other words, organizational justice is a potential moderator of CWB, due to the affect of the level of organizational justice on the impact of individual personality traits on CWB.

CWB and Organizational Citizenship Behaviour

Organizational citizenship behaviour (OCB) is generally defined as behaviour that goes beyond the formal requirements of the jobs and is beneficial to the organization. Examples of OCB may include assisting colleagues with their tasks, devoting time to assist new entrants to the organization, defending their organizational reputation, or even voluntary salary-cut. Yet there are different opinions about what causes OCB. Organ and Knovsky (1989) argued that OCB is an altruistic act, in which individuals contribute their efforts to both colleagues and organizations for selfless reasons. Such altruistic behaviours may be interpreted using either *cognitive determinants* (e.g., doing this task brings long-term interests to the department) or *affective determinants* (e.g., I belong to the organization, or I am willing to help my colleagues, as they are important to me and the company). However, OCB may also be explained by social exchange theory; Hui, Lam, and Law (2000) revealed that OCB can be a simple tactic for seeking a desired outcome, and once the outcome is achieved, the occurrence of OCB decreases immediately. In other words, demonstrating OCB also brings interests to the individual in the long term.

From an organizational perspective, OCB can be a crucial aspect of an employee's behaviour that contributes to overall organizational effectiveness. Podsakoff, Ahearne, and MacMenzie (1997) discovered that higher levels of OCB among employees were associated with the overall productivity and fewer defects. Spector (2006) claimed that OCB is most likely to occur when employees are satisfied with their jobs, have high levels of affective commitment, feel they are treated fairly, or have good relations with their colleagues. Bommer, Miles, and Grover (2003) claim that OCB is contagious, as people who work in groups where people tend to demonstrate OCB are more likely to perform OCB themselves. Diefendorff, Brown, Kamin and Lord (2002) also indicated that OCB is predicted by the roles of job involvement and work centrality.

In terms of OCB-CWB relationships, several meta-analyses have found that OCB and CWB share a moderately negative correlation, and represent two distinct constructs rather than a single continuum (Berry Ones, & Sackett, 2007; Dalal, 2005; Sackett et al., 2006). These findings are valuable and informative for several reasons. Firstly, when people demonstrate more OCBs, their

overall organizational performance improves. Secondly, OCB is not a constant variable, rather it changes along with a number of factors, including; individual desire, co-worker's attitude toward the organization, or the prevalence of voluntary overtime at work. Thirdly, OCB may act as a moderator to work performance, as higher levels of OCBs create better atmosphere at work (e.g., colleagues help each other, or voluntary cover-up for absentees), in which employees feel more positive about their work and are more willing to contribute to their organizations. The present study suggests that where this kind of work environment prevails, the occurrence of CWB will decline.

Research Framework

The current study has prudently scrutinized the association between personality characteristics and CWB from different perspectives. The potential moderating effects of *Organizational Justice* and *OCB* are critically discussed using empirical studies and literature. The current study, therefore, suggests that CWB is predicted by personality characteristics (PC), such as *personality traits* and *self-esteem*; the PC-CWB relationship is moderated by both *organizational justice* and *OCB*. In order to further understand the relationships between these variables, the present study proposes four specific hypotheses:

H₁: Distributive justice moderates the PC-CWB association.

H₂: Procedural justice moderates the PC-CWB association.

H₃: Interactional justice moderates the PC-CWB association.

H₄: OCB moderates the PC-CWB association such that PC effects on CWB become stronger as OCB decreases.

METHOD

Design and Procedure

This project adopted a cross-sectional approach using a large-scale questionnaire survey in Thailand. Participants from heterogeneous occupations and organizations are recruited. Participants were contacted through their line managers accordingly, and managers were approached using snowball sampling technique. This sampling technique enriches the data's representativeness, as it helps collect voices of employees from different occupations with different position. Similar sampling techniques are also used in contemporary studies of organizational behaviour and justice (*c.f.*, Kwok et al., 2005; Mount et al., 2006). Questionnaires were distributed in booklet form, along with a cover-letter assuring anonymity and voluntary participation. The research aim was also mentioned briefly.

Sample

The research sample was comprised of 1,662 employees working in the upper north regions of Thailand, from the following professions; nursing, university, government sector, factory work, and private-firms. 68% of the respondents were female, with a mean age of 31.16 years. 54.20% were graduates, having earned a bachelor degree. The majority of the sample (95.70%) was in operation-level positions. The mean employment tenure was 7.04 years.

Measures

The organizational citizenship behaviour scale (Lee & Allen, 2002), which is comprised of 16-items, was used to measure OCB. Responses were recorded using a 5-point Likert scale (0 = never, 4 = always) which rated how often they engaged in certain behaviours. Sample items included: *Assist others with their duties* and *Attend functions that are not required, but that help the organizational image*. The scale was translated to Thai with back-translation to ensure language equivalence and appropriateness. The internal consistency alpha was satisfactory: OCB ($\alpha = .90$).

The counterproductive work behaviours scale was compiled from two standardized scales (Gruys & Sackett, 2003; Robinson & Bennett, 1995), and was used to assess CWB. The objective was to include behaviours that represented the eleven categories of CWB that have been empirically validated by Gruys & Sackett (2003), as well as Robinson and Bennett's (1995) taxonomy of organizational deviance. The content validity of the instrument was assessed by three chartered psychologists. There were 22 items in total, and responses were recorded using a *5-point Likert scale* (0 = never, 4 = always) which rated how often they engaged in certain behaviours. Sample items included: *blaming mistakes on others* and *unauthorized absence*. The scale was translated to Thai with back-translation to ensure language equivalence. The internal consistency alpha was satisfactory: CWB ($\alpha = .93$).

The NEO-FFI-S (Costa & McCrae, 1992) is a 60-item self-report questionnaire that yields subscale scores for each of the five major dimensions of personality; neuroticism (N), extraversion (E), openness (O), agreeableness (A), and conscientiousness (C). Participants' responses were recorded using a *5-point Likert scale* (0 = strongly disagree, 4 = strongly agree). The present study used the authorized Thai translation of the NEO-FFI-S (Smithikrai, 2007) to collect personality data from the sample. The internal consistency alphas were satisfactory: N ($\alpha = .73$), E ($\alpha = .74$), O ($\alpha = .65$), A ($\alpha = .65$), and C ($\alpha = .71$).

Participants' global level of self-esteem was measured using a scale developed by Rosenberg (1965). This scale is one of the most frequently used instruments for measuring self-esteem (Brown, 1998). There were 10 items in total, and responses were recorded using a *5-point Likert scale* (0 = strongly disagree, 4 = strongly agree). Sample items included: *On the whole, I am satisfied with myself* and *I feel I do not have much to be proud of*. The scale was translated to Thai with back-translation to ensure language equivalence. The internal consistency alpha was satisfactory ($\alpha = .80$).

The three forms of organizational justice (distributive, procedural, and interactional justice) were measured using the eleven items developed by Rahim, Magner, Antonioni and Rahman (2001).

Each item was rated using a *five-point Likert scale* (0 = strongly disagree, 4 = strongly agree). Sample items included: *I believe that my rewards accurately reflect my contributions to the organization*, *My organization has in place formal channels that allow employees to express their views and opinions before decisions are made*, and *My supervisor treats me in a kindly manner*. The scale was translated to Thai with back-translation to ensure language equivalence and appropriateness. The internal consistency alphas were satisfactory: distributive ($\alpha = .76$), procedural ($\alpha = .80$), and interactional ($\alpha = .87$).

Additionally, demographical characteristics of the respondents were also gathered in the survey, including; gender, age, educational levels, job tenure, and job rank.

RESULTS

The descriptive statistics, reliabilities, and intercorrelations among the variables are shown in Table 1. Mean scores and standard deviation are obtained by averaging the items, which helps explain the means and their corresponding valence within the scale. For example, in terms of Extraversion scale (i.e., 5-point *Likert scale*), higher means represent more extraversion-oriented (4 = *strongly agree*), whereas lower means mean less extraversion-oriented (0 = *strongly disagree*). Alpha (α) shows the internal consistency reliability, i.e., it measures how well a set of items (or variables) measure a single unidimensional latent construct. Correlation coefficients represent the levels of linear relationship between two variables (Field, 2005).

(Table 1 Here)

To examine the hypotheses, Baron and Kenny's (1986) moderation analytic procedure was adopted. According to Baron and Kenny's equation, the moderating effect is only verified if the following three conditions are achieved: a). an independent variable (IV) significantly predicts a

dependent variable (DV); b). a moderator (M) significantly predicts the same DV; finally, c). the IV-M interaction significantly predicts the DV.

Following this analytic procedure, a series of regression analyses were conducted to examine the associations between CWB and all relevant variables using the *Stepwise* entry method, in which CWB was a dependent variable and all personality characteristics were predictors. Statistical analysis revealed that such association is moderately strong ($R = .560$). *FFM* (five variables) and *self-esteem* jointly accounted for 31.1% of the variation in CWB (ΔR^2). The results of collinearity diagnostics were reasonable, indicating that multi-collinearity is not severe between predictors ($CI = 33.510$). The regression coefficients of all characteristics are shown in Table 2.

(Table 2 Here)

The standardized regression coefficients confirmed that *FFM* (five variables) and *Self-esteem* were valid predictors of CWB. These findings revealed that employees possessing certain personality characteristics were less likely to demonstrate CWB; specifically, the higher the level of these characteristics, the lower the occurrence of CWB (*Conscientiousness* $\beta = -.292, p < .001$; *Agreeableness* $\beta = -.254, p < .001$; *Self-esteem* $\beta = -.115, p < .001$; *Extraversion* $\beta = -.085, p < .001$; *Neuroticism* $\beta = -.084, p < .01$; *Openness to experience* $\beta = -.047, p < .05$).

In addition, the current study regards both organizational justice and OCB as moderators of CWB. Regression analyses show that CWB was significantly predicted by: *Distributive justice* ($\beta = -.25, p < .001$), *OCB* ($\beta = -.17, p < .001$), *Interactional justice* ($\beta = -.09, p < .01$), but not *Procedural justice* ($\beta = -.25, p = .58$). For this reason, Procedural justice was eliminated from the moderational analyses.

Moderator: Distributive Justice

(Table 3 Here)

Following Baron and Kenny's (1986) formula, a series of moderational analyses were conducted. As Table 3 shows, the association between CWB and its predictors can be moderated by *Distributive justice* in four aspects, including: CWB-Conscientiousness ($\beta = .884$, $R = .531$, $\Delta R^2 = .280$, $p < .001$), CWB-Agreeableness ($\beta = .832$, $R = .495$, $\Delta R^2 = .244$, $p < .001$), CWB-Extraversion ($\beta = .892$, $R = .464$, $\Delta R^2 = .214$, $p < .001$), CWB-Openness to experience ($\beta = .745$, $R = .436$, $\Delta R^2 = .188$, $p < .001$) and CWB-Self-esteem ($\beta = .897$, $R = .488$, $\Delta R^2 = .237$, $p < .001$). However, *Distributive Justice* does not moderate the CWB-Neuroticism ($p = .44$).

Moderator: Interactional Justice

(Table 4 Here)

The same analytic procedure applies here. As Table 4 shows, the association between CWB and its predictors can be moderated by *Interactional justice* in three aspects, including: CWB-Conscientiousness ($\beta = .831$, $R = .510$, $\Delta R^2 = .259$, $p < .001$), CWB-Agreeableness ($\beta = .569$, $R = .450$, $\Delta R^2 = .201$, $p < .001$), and CWB-Openness to experience ($\beta = .352$, $R = .371$, $\Delta R^2 = .136$, $p < .05$). However, *Interactional justice* does not moderate the CWB-Extraversion ($p = .12$), CWB-Neuroticism ($p = .10$), or CWB-Self-esteem ($p = .52$).

Moderator: Organizational Citizenship Behaviour

(Table 5 Here)

The same analytic procedure applies here. As Table 5 shows, the association between CWB and its predictors can be moderated by *Organizational citizenship behaviour* in three aspects, including: CWB-Agreeableness ($\beta = .439$, $R = .442$, $\Delta R^2 = .194$, $p < .001$), CWB-Openness to experience ($\beta = .710$, $R = .359$, $\Delta R^2 = .127$, $p < .001$), and CWB-Self-esteem ($\beta = .666$, $R = .422$, $\Delta R^2 = .177$, $p < .001$). However, *Organizational Citizenship Behaviour* does not moderate the CWB-Conscientiousness ($p = .15$), CWB-Extraversion ($p = .08$), or CWB-Neuroticism ($p = .23$).

Path Analysis of Moderators

The aforementioned statistical analyses have discovered meaningful findings, revealing that the associations between personality characteristics and CWB are moderated by *Distributive justice*, *Interactional justice*, and *OCB*, respectively. These findings imply that personality characteristics may have stronger, more negative relationships with CWB when distributive justice, interactional justice, and OCB are low. To further examine these findings and the efficacy of moderating effect, the Structural Equation Modelling (SEM) technique was carried out. As prior moderation analyses verified the roles of three moderators (i.e., *Distributive justice*, *Interactional justice*, and *OCB*), the efficacy of these moderators was thus regarded as latent variables in the PC-CWB association. To account for all the variables together, three models are proposed (Figures 1, 2, and 3), in which personality characteristics predict the CWB and latent variables (oval shape) stand for the moderating efficacy on PC-CWB association (See *Footnote 2* for detailed analytic rationale).

(Figures 1, 2, and 3 Here)

In terms of model fit index, the present study did not adopt Chi-square (χ^2) and degree of freedom (df), as these indices are easily affected by the sample size and data distribution (Bentler, 1986). Due to this, the present study adopted more accurate fit indices, including: Goodness of fit index (GFI; Jöreskog & Sörbom, 1988), Comparative fit index (CFI; Bentler, 1990), and Root-mean-square error of approximation (RMSEA; Brown & Cudeck, 1993).

Three discrete SEMs were conducted to analyze the aforementioned moderators, i.e., *Distributive justice*, *Interactional justice*, and *OCB*. In Figure 1, M^1 stands for the moderating value of *Distributive justice* ($\chi^2 (14, N = 1662) = 173.80, p < 0.001; GFI = .97; CFI = .97; RMSEA = .083$). In Figure 2, M^2 stands for the moderating value of *Interactional justice* ($\chi^2 (5, N = 1662) = 43.83, p < 0.001; GFI = .99; CFI = .98; RMSEA = .068$). In Figure 3, M^3 stands for the moderating value of *Organizational citizenship behaviour* ($\chi^2 (5, N = 1662) = 35.44, p < 0.001; GFI = .99; CFI = .99; RMSEA = .061$). The fit indices (i.e., GFI, CFI, and RMSEA) of three SEMs were acceptable, indicating that these structural diagrams are adequate. Findings from these SEM models are meaningful and interpreted in several ways:

Firstly, the moderator *Distributive justice* stems from five variables (personality characteristics), including: *Conscientiousness* ($\beta = 3.58, p < .001$), *Agreeableness* ($\beta = 3.37, p < .001$), *Extraversion* ($\beta = 3.95, p < .001$), *Openness to experience* ($\beta = 2.93, p < .001$), and *Self-esteem* ($\beta = 3.24, p < .001$). These variables are also moderated by *Distributive justice* ($\beta = 0.32, p < .001$). However, such moderation has a negative impact on CWB ($\beta = -.025, p < .001$), implying that *Distributive Justice* helps alleviate the impact of personality characteristics on CWB.

Secondly, the moderator *Interactional justice* stems from three variables (personality characteristics), including: *Conscientiousness* ($\beta = 3.41, p < .001$), *Agreeableness* ($\beta = 3.37, p < .001$), and *Openness to experience* ($\beta = 2.73, p < .001$). These variables are also moderated by *Interactional justice* ($\beta = 0.32, p < .001$). However, such moderation has a negative impact on CWB ($\beta = -.028, p < .001$), implying that *Interactional justice* helps alleviate the impact of personality characteristics on CWB.

Thirdly, the moderator *OCB* stems from three variables (personality characteristics), including: *Agreeableness* ($\beta = 3.56, p < .001$), *Openness to experience* ($\beta = 2.97, p < .001$), and *Self-esteem* ($\beta = 3.10, p < .001$). These variables are also moderated by *OCB* ($\beta = 0.34, p < .001$). However, such moderation has a negative impact on CWB ($\beta = -.024, p < .001$), implying that *OCB* helps alleviate the impact of personality characteristics on CWB.

Finally, in terms of moderating statistical value, *Interactional justice* is the strongest ($\beta = -.028, p < .001$), followed by *Distributive justice* ($\beta = -.025, p < .001$) and *OCB* ($\beta = -.024, p < .001$). Apart from these SEMs findings, the moderation analyses have also revealed: a). *Distributive justice* moderates the PC-CWB association; b). *Interactional justice* moderates the PC-CWB association; and, c): *OCB* moderates the PC-CWB association. Thus supporting all hypotheses aside from H₂.

DISCUSSION

As counterproductive work behaviours (CWBs) are pervasive in the workplace, costly to organizations, and detrimental to employee's quality of work life, there is keen interest in understanding what can be done to alleviate the impact of CWB or, more proactively, prevent it. Contemporary studies have attempted to measure the influence of personal characteristics on CWB and their findings are meaningful. For example, both Western and Eastern researchers have discovered the stronger correlation between employees' deviant work behaviours and their individual characteristics, such as *Big-Five* personality traits, locus of control and self-esteem (*c.f.*, Dalal, 2005; Mount, Ilies, & Johnson, 2006; Smithikrai, in press). These studies have yielded valuable correlational information about the personality and attitudinal predictors of CWBs and provided a foundation upon which further research could build. The logical next step in this area of research would be to examine whether such correlations can be affected by other variables, as the findings of such research would help organizational leaders and managerial practitioners to alleviate the impact of personality characteristics on CWB, reduce the occurrence of CWBs, and, ultimately, contribute to the overall organizational performance.

Accordingly, the current study formulates and tests an integrative model that examines relationships among personality characteristics, moderators, and CWB. The present findings contribute to understanding CWB in several ways:

To begin with, the current study reveals that CWB is predicted by a series of personality characteristics, including: *FFM* (five variables) and *self-esteem*. That is to say, employees with certain personality characteristics are more likely to demonstrate CWB. Inspired by empirical studies, the current study compares the predictive power of these CWB predictors and discovers that *conscientiousness* is the strongest predictor of CWB (congruent with Dalal, 2005; Salgado, 2002), followed by *agreeableness*, *self-esteem*, *extraversion*, *neuroticism*, and *openness to experiences*. These new findings not only confirmed the influences of personality characteristics on CWB but also ranked their magnitude (*i.e.*, predictive power).

Second, the current study affirms that the associations between personality characteristics and CWB are moderated by *distributive justice*, *interactional justice*, and *organizational citizenship behaviour* (OCB). However, *procedural justice* is not a valid moderator in this case. These findings are meaningful in several aspects: a). *Distributive justice* and *interactional justice* are perceived as important to the employees, implying that the fairness of outcomes and interpersonal treatment at work plays a key role in employees' evaluation toward their workplace. b). *OCB* is also perceived important to the employees; c). The aforementioned points have jointly conveyed a clear message that, when organizational injustice exists (or when the occurrence of OCB is scarce), employees with extreme personality characteristics are more likely to demonstrate CWB; and, finally, d). *Procedure justice* may not be as important as other types of justice to the employees in this study. This phenomenon may be interpreted by an assumption that employees tend to focus on final allocation of their fairness/interests rather than the allocational procedure *per se*. Certainly, this interpretation is an assumption in nature and requires further verification.

Third, the findings extracted from the *Structural Equation Modeling* have clarified the magnitude (i.e., moderating efficacy) of three moderators. The strongest is the *interactional justice*, followed by *distributive justice* and *organizational citizenship behaviour*. These findings are informative to the management and prevention of CWB. To be exact, the occurrence of CWB can be reduced by the implementation of justice enhancement programmes, especially the *interactional justice* and *distributive justice*; and, b). The prevalence of OCB atmosphere at work can also help alleviate the impact of personality characteristics on CWB.

Finally, the findings of the current study have extended contemporary personality-CWB interrelation (e.g., Dalal, 2005; Salgado, 2002; Smithikrai, in press) literature by scrutinizing the influences of organizational justice and organizational citizenship behaviour. These findings first and foremost pave a way to interpret the association between personality characteristics and CWB. These findings also convey valuable and informative messages to the general managerial practitioners. Implications of these findings are critically discussed below.

Implications to the Managerial Practitioners

Due to the prevalence of the equal opportunity policy, personnel officers may not easily preclude candidates with certain personality characteristics during the recruitment or promotional procedure. Personality assessment serves as only part of the personnel assessment and evaluation process, and the psychometrics results may not necessarily represent the characteristics (or performance) of an individual in the workplace.

Trying to find honest, reliable answers is also challenging due to the potential affect of the social desirability effect, and the reliability of psychometrics has been continually debated by both academics and field users. Both the positive and the negative observations regarding the application of psychometrics at work are valid in their circumstances, resulting in a lack of consensus (Pervin & John, 2004).

Nevertheless, from a practical perspective, the current study has opened a new avenue for managerial practitioners to tackle CWB. Specifically, the findings here have revealed that CWB can be alleviated by the implementation of distributive justice, interactional justice and OCB enhancement. Details of these enhancement tactics follow:

Firstly, organizational managers and team leaders should be aware that there may be some factors (e.g., *interactional injustice* and *distributive injustice*) embedded in their workplace, which are currently provoking CWB and affecting their employees. Without removing these provoking factors, any CWB intervention programmes may not reach their maximum efficacy.

Secondly, since the moderating effect of *interactional justice* and *distributive justice* are significant, there is an urgent need to develop corporate policies to enhance organizational justice. Both government and local authorities should also monitor the implementation of these justice enhancement policies and offer *in-site* advices accordingly, so that employees are guaranteed that they are treated with fairness at work. The current study believes that both employees and

employers can benefit from these policies, as CWB can be more efficiently managed or even reduced.

Third, from a preventive perspective, installing an organizational justice audit is informative to the human resources management. Once injustice is detected, the management staff can tackle with the sources of injustice and devise coping strategies appropriately, and, ideally, the impact of injustice on CWB can be regulated from the beginning.

Furthermore, organizational management staff should acknowledge the value of OCB and, if applicable, praise it with substantial rewards. As aforementioned in the Introduction, OCB is contagious in nature (Boommer et al., 2003). If people who demonstrate OCB receive substantial rewards, other employees may also follow and demonstrate more OCB themselves. Following this advice (i.e., giving rewards) may be initially costly to the organizations; however, the consequences should bring foreseeable benefits to both employers and employees in the long run.

Limitations of the Study

Almost every research project has its drawbacks and there is no exception for the current study. The initial drawback is that questionnaire respondents have been shown to give socially desirable responses, despite their anonymity being guaranteed (also known as the *Social Desirability Effect*). Fox and Spector (1999) argue that the reliance on cross-sectional and self-report methodology is essentially problematical in organizational behaviour research, as the use of a single source of data, such as self-report questionnaires, may result in an overstatement of relationships among the variables. However, given the current study's focus on affective and behavioural responses to the perceived, rather than objective, environment, the difficulty of obtaining uncontaminated measures of CWB, and ethical concerns with the possibility of putting research participants at risk in the accumulation of evidence of CWB, the current study asserts that anonymous self-reports are still able to provide the closest available approximation of these relations.

In the current study, the analytic steps are inclined to explain that personality generates subtle impact on the occurrence of counterproductive behaviour. Although such explanation was supported by the data, it is not concluded that this is the only relationship between personality traits and CWB. From a different perspective, it could be argued that the moderating variables (e.g., interactional justice) could be a consequence of individuals' attempts to rationalise their CWB. If this is the case, personality traits may not be a CWB-trigger, but rather be a recipient of interactional justice. It is possible that the dynamics across these variables are much more complicated than the expectation in the current study. Future researchers may wish to broaden the scope of personality-CWB framework and further analyze the dynamics across variables.

The current study regards personality as a constant variable (see discussions in: Pervin & John, 2004). Due to this, the findings here must be interpreted with caution, as experts have not unanimously verified the stability of personality. If personality is not a constant variable, its impact on CWB may require further investigation. Future research may extend the scope by analyzing the stability of personality characteristics and measuring their influences on CWB.

Situational variables may also influence the personality-moderator-CWB nexus and would be useful for future research to explore. These include *leadership style*, *organizational culture*, *presence of electronic monitoring*, and *reward systems* (e.g., Marcus & Schuler, 2004; Martinko et al., 2002). The SEM models only provide a parsimonious framework that is theoretically and empirically grounded for other researchers to build on, but the current study recognizes that the inclusion of perceptual and situational variables is also useful and may change the path estimates obtained here.

Finally, the findings here have highlighted that organizations may be able to reduce the occurrence of CWB that undermine their effectiveness by developing managerial interventions/policies, such as the enhancement of organizational justice and OCB. Although the implementation of such interventions may sometimes incur financial pressure to the organizations, however, both employers and employees will receive worthy benefits in the long run.

REFERENCES

- American Management Association (2005). Workplace monitoring and surveillance.
<http://www.amanet.org/movingahead/> [Accessed on 13 Oct 2007]
- Adams, J. S. (1965). Inequity in social exchange. In: L. Berkowitz (Ed.), *Advances in experimental social psychology* (Vol. 2, pp. 267–299). New York: Academic Press.
- Baron, R., & Kenny, D. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, 51, 6, 1173-1182.
- Bennett, R. J., & Robinson, S. L. (2000). Development of a measure of workplace deviance. *Journal of Applied Psychology*, 85, 349-360.
- Bentler, P.M. (1986). Structural Modelling and Psychometrics: on growth and achievements. *Psychometrika*, 51 (1), 35-51.
- Berry, C.M., Ones, D.S., & Sackett, P.R. (2007). Interpersonal deviance, organizational deviance, and their common correlates: A review and meta-analysis. *Journal of Applied Psychology*, 92, 410-424.
- Bies, R. J., & Moag, J. F. (1986). Interactional justice: Communication criteria of fairness. In: R. J. Lewicki, B. H. Sheppard, & M. H. Bazerman (Eds.), *Research on negotiations in organizations* (Vol. 1, pp. 43–55). Greenwich, CT: JAI Press.
- Bommer, W.H., Miles, E.W., & Grover, S.L. (2003). Does one good turn deserve another- Coworker influences on employee citizenship. *Journal of Organizational Behaviour*, 24, 181-196.
- Brown, J. D. (1998). *The self*. San Francisco: McGraw Hill.
- Brown, M.W., & Cudeck, R. (1993). Alternative ways of assessing model fit. In: K. A. Bollen. & J. S. Long. (Eds.). *Testing Structural Equation Models* (pp. 136-162). Newsbury Park, CA: Sage.
- Case J. (2000). *Employee theft: The profit killer*. Del Mar, CA: John Case & Associates.
- Chen, C.H., Tang, Y.Y., Ho, B.J., & Jehng, J.C. (2007). Effects of jobs stress, personality traits, and job involvement on police officers' organizational citizenship behaviour. *Journal of Public Administration*, 25, 67-93.
- Cohen-Charash, Y., & Spector, P. (2001). The role of justice in organizations: A meta-analysis. *Organizational Behaviour and Human Decision Processes*, 86 (2), 278-321.
- Costa, P. T. Jr., & McCrae, R. R. (1992). *NEO Personality Inventory–Revised (NEO-PI-R) and NEO Five-Factor Inventory (NEO-FFI) professional manual*. Psychological Assessment Resources: Odessa, FL.

- Cropanzano, R., & Randall, M. L. (1993). Injustice and work behavior: A historical review. In: R. Cropanzano (Ed.), *Justice in the workplace: Approaching fairness in human resource management* (pp. 3–20). Hillsdale, NJ: Erlbaum.
- Dalal, R. S. (2005). A meta-analysis of the relationship between organizational citizenship behavior and counterproductive work behaviour. *Journal of Applied Psychology*, 90, 1241-1255.
- Diefendorff, J. M., Brown, D. J., Kamin, A.M., & Lord, R.G. (2002). Examining the roles of job involvement and work centrality in predicting organizational citizenship behaviors and job performance. *Journal of Organizational Behaviour*, 23(1), 93-108.
- Field, A. (2005). *Discovering statistics: Using SPSS for Windows*. London: Sage.
- Folger, R. (1993). Reactions to mistreatment at work. In: J. K. Murnighan (Ed.), *Social psychology in organizations: Advances in theory and research* (pp. 161–183). Englewood Cliffs, NJ: Prentice Hall.
- Fox, S., & Spector, P.E. (1999). A model of work frustration-aggression. *Journal of Organizational Behaviour*, 20, 915-931.
- Fox, S., Spector, P.E., & Miles, D. (2001). Counterproductive work behaviour (CWB) in response to job stressors and organizational justice: Some mediator and moderator tests for autonomy and emotions. *Journal of Vocational Behaviour*, 59, 291-309.
- Giacalone, R.A., Riordan, C.A., & Rosenfeld, P. (1997). In: Giacalone, R., Greenberg, J. (Eds.). *Antisocial behaviour in organizations* (pp. 109-129). Thousand Oaks, CA: Sage.
- Greenberg, J. (1990). Employee theft as a reaction to underpayment inequity: The hidden cost of pay cuts. *Journal of Applied Psychology*, 75, 561–568.
- Gruys, M. L., & Sackett, P. R. (2003). Investigating the dimensionality of counterproductive work behaviour. *International Journal of Selection and Assessment*, 11, 30-41.
- Hoel, H., Einarsen, S., & Cooper C. (2003). Organizational effects of bullying. In: Einarsen, S., Hoel, H., Zapf, D., & Cooper, C. (Eds.). *Bullying and emotional abuse in the workplace: International perspectives on research and practice*. London: Taylor & Francis.
- Hough, L. M. (1992). The “Big Five” personality variables - Construct confusion: Description versus prediction. *Human Performance*, 5, 139-155.
- Hui, C., Lam, S.S.K., & Law, K.K.S. (2000). Instrumental values of organizational citizenship behaviour for promotion: A field quasi-experiment. *Journal of Applied Psychology*, 85, 822-828.
- Hunt, S.T. (1996). Generic work behaviour: An investigation into the dimensions of hourly job performance. *Personnel Psychology*, 49, 51-83.
- Ilies, R., Hauserman, H., Schwochau, S., & Stibal, J. (2003). Reported incidence rates of workrelated sexual harassment in the United States using meta-analysis to explain reported rate disparities. *Personnel Psychology*, 56, 607-631.

- Jermier, J. M., Knights, D., & Nord, W. (1994). *Resistance and power in organizations*. London: Routledge.
- Jöreskog, K. G., & Sörbom, D. (1988). *LISREL 7: A Guide to the Program and Application*. Chicago: SPSS Inc.
- Kwok, C. K., Au, W. T., & Ho, J. M. C. (2005). Normative controls and self-reported counterproductive behaviors in the workplace in China. *Applied Psychology: An International Review*, 54(4), 456–475.
- Lee, K., & Allen, N. J. (2002). Organizational citizenship behavior and workplace deviance: The role of affect and cognitions. *Journal of Applied Psychology*, 87, 131-142.
- Lin, Y. J. B. (2005). *Individual differences and their influences on work behaviours*. Master Thesis. China Medical University, Taiwan.
- Lind, E.A., & Tyler, T.R. (1988). *The social psychology of procedural justice*. N.Y.: Plenum Press.
- Marcus, B., & Schuler, H. (2004). Antecedents of counterproductive behaviour at work: A general perspective. *Journal of Applied Psychology*, 89, 647-660.
- Martinko, M.J., Gundlach, M.J., & Douglas, S.C. (2002). Toward and integrative theory of counterproductive workplace behaviour: A causal reasoning perspective. *International Journal of Selection and Assessment*, 10, 36-50.
- McCrae, R.R., & Costa, P.T. Jr. (1997). Personality trait structure as a human universal. *American Psychologist*, 52, 509-516.
- McCrae, R.R., Terracciano, A., & 78 Members of the Personality Profiles of Cultures Project. (2005). Personality profiles of cultures: aggregate personality traits. *Journal of Personality and Social Psychology*, 89, 407-425.
- McDonald, R.P., & Ho, M.R. (2002) Principles and practice in reporting structural equation analysis. *Psychological Methods*, 7, 64-82.
- Mount, M.K., & Barrick, M.R. (1995). The big five personality dimension: Implications for research and practice in human resources management. *Research in Personnel and Human Resources Management*, 13, 153-200.
- Mount, M. K., Ilies, R., & Johnson, E. C. (2006). Relationship of personality traits and counterproductive work behaviors: the mediating effects of job satisfaction. *Personnel Psychology*, 59, 591-622.
- Murphy KR. (1993). *Honesty in the workplace*. Belmont, CA: Brooks Cole.
- Organ, D.W., & Konovsky, M. (1989). Cognitive versus affective determinants of organizational citizenship behaviour. *Journal of Applied Psychology*, 74, 157-164.
- Pervin, L.A., & John, O.P. (2004). *Personality: Theory and Research*. New York: John Wiley.

- Podsakoff, P.M., Ahearne, M., & MacMenzie, S. B. (1997). Organizational citizenship behaviour and the quantity and quality of work group performance. *Journal of Applied Psychology*, 82, 262-270.
- Rahim, M. A., Magner, N. R., Antonioni, D., & Rahman, S. (2001) Do justice relationships with organization-directed reactions differ across U.S. and Bangladesh employees? *The International Journal of Conflict Management*, 12, 333–349.
- Robinson, S. L., & Bennett, R. J. (1995). A typology of deviant workplace behaviors: A multidimensional scaling study. *Academy of Management Journal*, 38, 555-572.
- Rosenberg, M. (1965). *Society and the adolescent self-image*. Princeton, New Jersey: Princeton University Press.
- Sackett, P. R., Berry, C. M., Wiemann, S. A., & Lacz, R. M. (2006). Citizenship and counterproductive work behaviour: Clarifying relationships between the two domains. *Human Performance*, 19, 441–464.
- Salgado, J. F. (1997). The five factor model of personality and job performance in the European Community. *Journal of Applied Psychology*, 82, 30-43.
- Salgado, J. F. (2002). The big five personality dimensions and counterproductive behaviors. *International Journal of Selection and Assessment*, 10, 117-125.
- Skarlicki, D. P., & Folger, R. (1997). Retaliation in the workplace: The roles of distributive, procedural, and interactional justice. *Journal of Applied Psychology*, 82, 434-443.
- Skarlicki, D. P., Folger, R., & Tesluk, P. (1999). Personality as a moderator in the relationship between fairness and retaliation. *Academy of Management Journal*, 42, 100-108.
- Smithikrai, C. (2007). Personality traits and job success: An investigation in a Thai sample. *International Journal of Selection and Assessment*, 15 (1), 134-138.
- Smithikrai, C. (in press). The moderating effect of situational strength on the relationship between personality traits and counterproductive work behaviour. *Asian Journal of Social Psychology*.
- Spector, P. E. (1994). Using self-report questionnaires in OB research: A comment on the use of a controversial method. *Journal of Organizational Behavior*, 15: 385–392.
- Spector, P. (2006). *Industrial and organizational psychology – Research and Practice*. (4th ed.). New Jersey: John Wiley & Sons.

FOOTNOTES

Footnote 1. Correlation coefficients represent the levels of linear relationship between two variables (Field, 2005), including: strong correlation (.70-.99), moderate correlation (.40-.69), weak correlation (.10-.39), and zero correlation (below .10). For the sake of clarity, original correlation coefficients are not specified here. Readers should refer to the original sources for further statistical details.

Footnote 2. From an integrated perspective, it is expedient to incorporate three discrete models in one single diagram. However, the significant correlation between Distributive Justice, Interactional Justice, and OCB (see Table 1: $r_s = .24^{**}$, $.39^{**}$ and $.44^{**}$, respectively) may yield to multi-collinearity phenomenon if these three variables are computed in a single model. Multi-collinearity phenomenon often makes the interpretation more difficult and misleads the researchers (Field, 2005). Considering the nature and validity of the data interpretation, authors thus decided to conduct three separate analyses so individual variables in the diagram can be further examined and multi-collinearity phenomenon can be reduced.

Table 1*Inter-correlations across variables (N = 1662)*

Variable	Mean	SD	α	1	2	3	4	5	6	7	8	9	10	11
1. Organizational citizenship behaviour	2.43	.63	.90											
2. Counterproductive work behaviour	.60	.41	.93	-.27**										
3. Neuroticism	2.21	.56	.73	-.26**	.21**									
4. Extraversion	2.72	.48	.74	.45**	-.36**	-.40**								
5. Openness	2.51	.45	.65	.34**	-.29**	-.29**	.43**							
6. Agreeableness	2.38	.49	.65	.31**	-.41**	-.44**	.42**	.30**						
7. Conscientiousness	2.90	.42	.71	.35**	-.47**	-.27**	.45**	.39**	.33**					
8. Self-esteem	2.73	.46	.80	.37**	-.39**	-.48**	.50**	.39**	.39**	.53**				
9. Distributive justice	2.03	.83	.76	.24**	-.34**	-.26**	.25**	.15**	.25**	.28**	.21**			
10. Procedure justice	2.12	.76	.80	.34**	-.29**	-.28**	.31**	.17**	.30**	.27**	.19**	.62**		
11. Interactional justice	2.41	.76	.87	.39**	-.28**	-.31**	.35**	.21**	.30**	.25**	.27**	.44**	.69**	

Note: **. $p < .01$

Table 2*Regression coefficients of predictors (N = 1662)*

	B	Std. Error	Beta (β)
predictors			
(Constant)	2.645	.099	
Conscientiousness	-.024	.002	-.292***
Agreeableness	-.018	.002	-.254***
Self-esteem	-.010	.002	-.115***
Extraversion	-.006	.002	-.085***
Neuroticism	-.005	.002	-.084**
Openness to experience	-.004	.002	-.047*

Note: Total $R = .560$; $R^2 = .314$; $\Delta R^2 = .311$ (*. $p < .05$; **. $p < .01$; ***. $p < .001$.)

Table 3*Moderational Analyses of Distributive Justice (N = 1662)*

Variables	β of Predictors (P)	β of Moderator (M)	β of (P) x (M)	Total R	ΔR^2
Conscientiousness	-.667***	-.994***	.884***	.531	.280
Agreeableness	-.687***	-.915***	.832***	.495	.244
Extraversion	-.615***	-1.01***	.892***	.464	.214
Neuroticism	.171**	-.258***	-.055 ($p = .44$)	.362	.129
Openness to experience	-.527***	-.943***	.745***	.436	.188
Self-esteem	-.628***	-1.04***	.897***	.488	.237

Note: *. $p < .05$; **. $p < .01$; ***. $p < .001$.

Table 4*Moderational Analyses of Interactional Justice (N = 1662)*

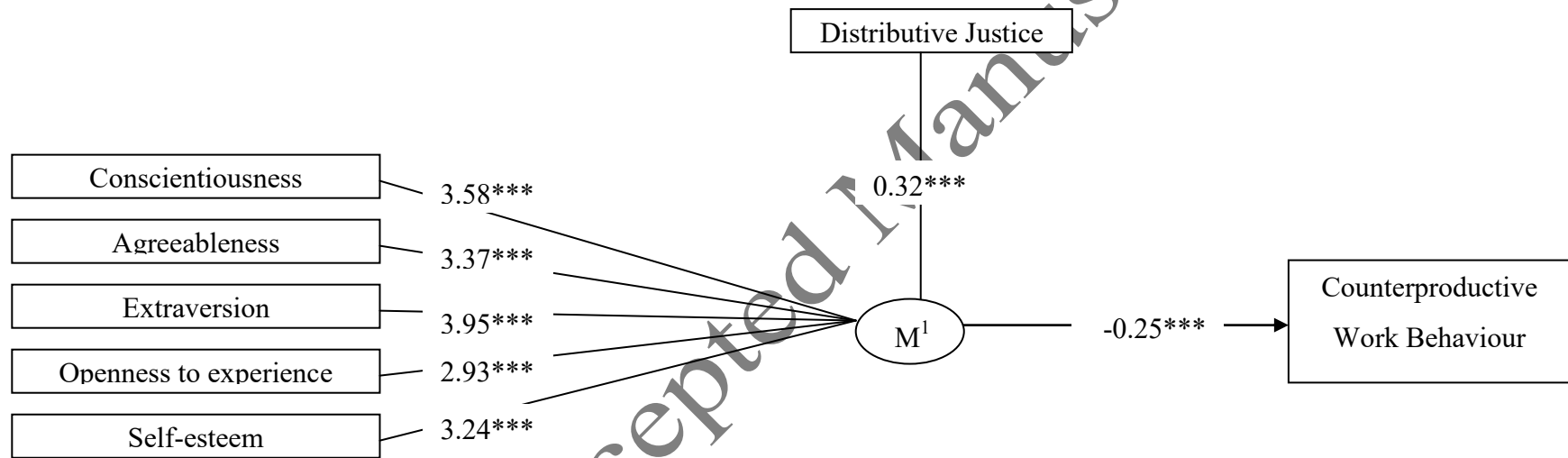
Variables	β of Predictors (P)	β of Moderator (M)	β of (P) x (M)	Total R	ΔR^2
Conscientiousness	-.746***	-.856***	.831***	.510	.259
Agreeableness	-.638***	-.582***	.569***	.450	.201
Extraversion	-.409***	-.347**	.234 ($p = .12$)	.401	.159
Neuroticism	.021 ($p = .78$)	-.351***	.141 ($p = .10$)	.309	.094
Openness to experience	-.404***	-.503***	.352*	.371	.136
Self-esteem	-.380***	-.268*	.102 ($p = .52$)	.429	.183

Note: *. $p < .05$; **. $p < .01$; ***. $p < .001$.

Table 5*Moderational Analyses of Organizational Citizenship Behaviour (N = 1662)*

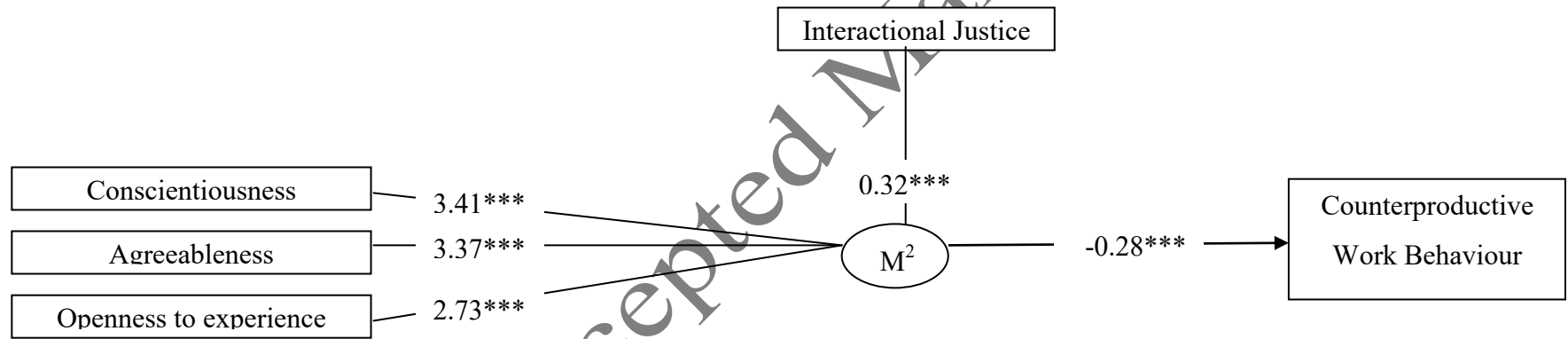
Variables	β of Predictors (P)	β of Moderator (M)	β of (P) x (M)	Total R	ΔR^2
Conscientiousness	-.533***	-.321*	.256 ($p = .15$)	.487	.236
Agreeableness	-.595***	-.458***	.439***	.442	.194
Extraversion	-.433***	-.319**	.271 ($p = .08$)	.386	.147
Neuroticism	.257**	-.152*	-.120 ($p = .23$)	.310	.094
Openness to experience	-.578***	-.695***	.710***	.359	.127
Self-esteem	-.650***	-.622***	.666***	.422	.177

Note: *. $p < .05$; **. $p < .01$; ***. $p < .001$.



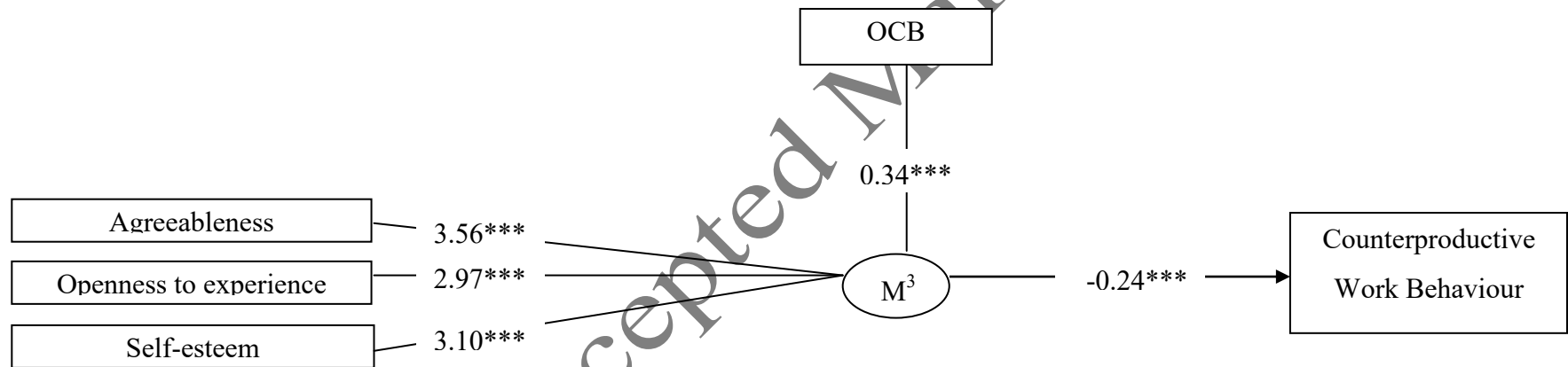
Note: M^1 = Moderating value (***, $p < .00$)

Figure 1: SEM Diagram of Distributive Justice



Note: M^2 = Moderating value (***. $p < .00$)

Figure 2: SEM Diagram for Interaction Justice



Note: M^3 = Moderating value (***, $p < .00$)

Figure 3: SEM Diagram for OCB