



School of Social and Behavioral Sciences

Master Thesis Human Resources Studies

The Effect of Enriched Job Design on Innovative Work Behaviour

Project theme: Innovative-work-behaviour

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Abstract

The current study investigated the indirect effect of enriched job design on innovative work behaviour (IWB) through affective commitment. At the same time, the effect of transformational leadership was tested on the relationship between affective commitment and IWB, such that affective commitment has a strong effect on IWB when transformational leadership is high and a less strong effect when it is low. The theoretical foundation of the direct effect of job enrichment on IWB was derived from the Job Characteristics Model of Hackman and Oldham (1976) and supported with the Self-Determination Theory (SDT) of Deci and Ryan (1985). Furthermore, the mediating effect of affective commitment was theoretically supported by the Social Exchange Theory (SET) of Blau (1964). The current study distributed digital questionnaires as well as paper-based questionnaires among different Aruban and Dutch organization, which resulted in a total of 292 respondents. The resampling bootstrap process macro method of Hayes (2013) was used in order to test the proposed mediating and moderating effects. The results of the current study showed that job enrichment had a positive direct effect on IWB. The indirect effect of job enrichment on IWB through the mediating variable of affective commitment was not supported. Furthermore, transformational leadership was added as moderator in order to examine whether the relationship of affective commitment on IWB is strengthened by its effect. The expected moderating effect of transformational leadership was found, when excluding job enrichment from the analyses. The current study based its results on the whole model; the hypothesized moderated-mediation model was not supported. Further, discussions of the results are presented in the paper as well as recommendations for future research.

Keywords:

Innovative work behaviour, job enrichment, affective commitment, transformational leadership.

Introduction

A considerable amount of literature has been published on the crucial needs for workplace innovation (Dorenbosch, van Engen & Verhagen, 2005; Ramamoorthy, Flood, Slattery & Sardesai, 2005; de Jong & den Hartog, 2008; de Spiegelare, van Gyes, de Witte, Biesen & van Hootegem, 2014). Previous research endorses the view that innovative potential of employees is a salient factor for organizational competitiveness and organizational growth (Dorenbosch et al., 2005; Hammond, Neff, Farr, Schwall & Zhao, 2011). In the same vein, organizations rely on their employees to meet the rapid changes and demands within their environment (Ramamoorthy et al., 2005). Thus, employees can contribute in helping their organizations to adapt rapidly to changing environments (NG & Feldman, 2011).

A growing body of research demonstrates that the concept of innovative work behaviour (IWB) refers to the exploration of opportunities, idea generation, and behaviours that are relevant to implement these ideas, and achieve improvements that will enhance good performance (Dorenbosch et al., 2005; de Jong & den Hartog, 2008). At the same time, evidence also suggests that the notion of an employee voluntarily doing more than what is required is also present in the concept of IWB (Dorenbosch et al., 2005; Ramamoorthy et al., 2005). Consequently, organizations depend on their employees to take personal responsibility for change and on their quick anticipation on possibilities to change (Giebels, de Reuver, Rispens & Ufkes, 2016). However, detailed understanding of employees' motivation to engage in innovativeness, to improve things in their job as well as to properly promote individual innovation is still inconsistent (Hammond et al., 2011). Therefore, the current study seeks to provide insight regarding the direct effect of enriched job design on IWB.

Evidence suggests that job design is a key determinant in promoting the opportunity and the motivation to exhibit IWB (Dorenbosch et al., 2005; Ramamoorthy et al., 2005; de Spiegelare et al., 2014). The Job Characteristics Model (JCM) of Hackman and Oldham (1976) is the leading theoretical framework on job design research at the individual level (Dorenbosch et al., 2005). The JCM explains the main relation between job characteristics and the opportunities that the job gives for intrinsic work motivation (van Woerkom, 2003). The literature identified job autonomy as an important antecedent of an employee's creativity and innovative behaviours (Ramamoorthy et al., 2005; Hammond et al., 2011; de Spiegelare et al., 2014). Next, feedback from the job showed to influence employees' behaviours to engage in innovativeness (Battistelli, Montani & Odoardi, 2013). Finally, task variety and task significance was supported to increase employee's performance (Grant, 2008). Despite the strong evidence of the independent constructs of job design research in relation with innovation, a coherent model is still lacking.

The current study seeks to examine the effect of enriched job design on IWB. Job enrichment leads to specific outcomes, such as experiencing three critical psychological states, and these psychological states are determined by the presence of the five job characteristics i.e., task variety, task significance, task identity, feedback from the job and job autonomy (Hackman & Olham, 1976; Boonzaier, Ficker & Rust, 2001). According to the JCM, task variety, task significance and task identity determines meaningfulness of the work and are characterized by employees who exert control and responsibility of their work. Next, feedback from the job determines knowledge of the results of work and is characterized by receiving feedback from the job, with employees being prone to exhibit positive work outcomes. Finally, job autonomy determines responsibility for work outcomes and is characterized as employees' participation in a broad variety of challenges and complex tasks. The Self-Determination Theory (SDT) of Deci and Ryan (1985) further elaborates on the understanding of experiencing enriched job design which increases the motivation, satisfaction and productivity of the employees (Axtell, Holman, Unsworth, Wall, Waterson & Harrington, 2000; Hammond et al., 2011; Battistelli et al., 2013). Consequently, experiencing enriched job design broadens the psychological boundaries of one's job, enhancing innovative behaviour through engaging in a more proactive sense of choice concerning work-related problems.

Motivational forces from enriched job design influence affective as well as behavioural outcomes (Morgeson & Campion, 2003; Whittington, Goodwin & Murray, 2004). Studies showed that strong performance on the job and positive job attitude are results of employees with high organizational commitment, especially affective commitment (NG & Feldman, 2011). The present effect of affective commitment is explored within the Social Exchange Theory framework (SET) of Blau (1964), since a number of studies adopted this framework (Slattery, Selvarajan, Anderson & Sardesai, 2010; Jafri, 2010; Gillet & Vandenberghe, 2014). For instance, Gillet and Vandenberghe (2014) found that enriched job design facilitates motivation (e.g. intrinsic motivation) thereby leading to high levels of affective commitment. Moreover, Jafri (2010) found that employees are likely to engage in innovative behaviours when they are emotionally attached toward the goals and values of the organization. Accordingly, the current study examines the intermediate effect of affective commitment between enriched job design and IWB.

The literature of creativity and innovation highly recognized the critical role of contextual factors, for example the presence of an open and supportive environment (Hammond et al., 2011). Various studies specifically emphasized the impact of leadership on creative effort and innovation (Reuver et al., 2008; Henkin & Holliman, 2009; Hammond et al., 2011). Such as transformational leadership, this kind of leadership style encourages employees to perform

beyond expectation and create a condition that contributes to align employee's identities and values with the values and goals of the organization (Gillet & Vandenberghe, 2014). In 1993, Shamir, House and Arthur presented that employees experiencing leaders that activate their desire of their personal values and goals with the values and goals of the organization, will increase the chance that employees will regulate their behaviours to internal self-related causes, which adds to the commitment of the employees toward a course of action (e.g. innovative behaviour) (Bono & Judge, 2003). Thus, transformational leaders could strengthen the effect of employees' affective commitment on IWB even further, because transformational leaders activate an intrinsic value and motivate employees' desire to perform beyond expectations. Therefore, the current study considers transformational leadership as an important moderator on the relationship between affective commitment and IWB.

The current study contributes to add value to the detailed understanding of job design, but especially in relation with innovation. First, this study examines a coherent model of enriched job design on IWB (Dorenbosch et al., 2005; Ramamoorthy et al., 2005; de Spiegelaele et al., 2014). Second, this study enhances the underlying understanding between motivation from the job to the motivation to innovate (Dorenbosch et al., 2005). Third, the current study provides insight by studying the intermediate role of affective commitment (Jafri, 2010). Finally, this study further contributes to the extensive research of transformational leadership as important shapers of the work environment and encouragement of their employees' innovative behaviours (Hammond et al., 2011). Nevertheless, new insights will also be available for practitioners to promote IWB. Practitioners would properly designing enriched jobs (Cumming & Worley, 2015) and offering training for leaders to be more a transformational (Wang & Walumbwa, 2007). These results are relevant for organizations and practitioners since innovation at the workplace is crucial for organizations' survival and success. Consequently, the following research question and sub-question are formulated:

1. To what extent does affective commitment mediate the relationship between enriched job design and IWB?
 - a. To what extent does transformational leadership moderate the relationship between affective commitment and IWB?

This paper proceeds as follow: the mentioned theories and concepts will be discussed in the theoretical framework, followed by the method and results section and at last the conclusion and discussion will be discussed.

Theoretical framework and conceptual model

Innovative work behaviour

General consensuses are available that innovation is salient for organizations and is rooted in the contribution of their employees (Dorenbosch et al., 2005; Reuvers, van Engen, Vinkenbunrg & Wilson- Evered, 2008). However, a debate exists regarding the exact definition and measure of the construct of innovative work behaviour (IWB) (Anderson, Potočnik & Zhou, 2014; de Jong & den Hartog, 2010). de Spiegelaere, van Gyes and van Hootegem (2014) described IWB as “all employee behaviour directed at the generation, introduction and/or application (within a role, group or organization) of ideas, processes, products or procedures, new to the relevant unit of adoption that supposedly significantly benefit the relevant unit of adoption” (p.319). This definition emphasizes the importance of employees discovering, suggesting and implementing relative novel work-related ideas and innovative behaviour provides some kind of benefit that affect the different levels of the organization (de Jong & den Hartog, 2008).

Research distinguishes four dimensions within the concept of IWB, namely problem recognition, idea generation, idea promotion and idea realization (Dorenbosch et al., 2005; de Jong & den Hartog, 2010). These four dimensions are linked with the different stages of the innovation process, namely the creative and implementation stage (Messman & Mulder, 2012). Problem recognition and idea generation encompasses the understanding of creativity behaviour, in which employees identify work-related problems, and generate useful ideas to address this problem within their own work context. Idea promotion and idea realization encompasses the understanding of implementation work behaviour, in which employees promote the generated idea which ultimately can be applied in the workplace (Dorenbosch et al., 2005; de Spiegelaere et al., 2014).

Job characteristic model

Research showed that the influential factor for behaviour is related to the psychological meaning of an employee that attaches him or her to a situation (van Woerkom, 2003). Job design has been considered an important contributor to an employee’s intrinsic motivation and creative performance at the workplace (Amabile, 1988; Oldham & Hackman, 1976; Oldham & Cumming, 1996). A key theory of job design is the Job Characteristic Model (JCM) of Hackman and Oldham (1976). The JCM includes five core characteristics of the job and Morgeson and Humphrey (2006) defined these characteristics as follows: “*Task variety* is the degree to which a job requires employees to perform a wide range of tasks on the job” (p.1323). Thus, a job that encompasses different work activities is considered as interesting and enjoyable. “*Task identity* reflects the degree to which a job involves a whole piece of work, the results of which can be

easily identified” (p.1323). Such a job involves performing a whole task rather than small parts of the task. “*Task significance* is the extent to which a job influences the lives or work of other people, whether inside or outside the organization” (p.1323). Employees in jobs that have a significant effect on others are more likely to experience meaningfulness in their work. “*Feedback from the job* reflects the degree to which the job provides direct and clear information about the effectiveness of task performance” (p.1323). In other words, feedback refers to the information one gets about the job. “*Autonomy* reflects the extent to which a job allows freedom, independence, and discretion to schedule work, make decisions, and choose the methods used to perform tasks” (p.1323). Thus, the jobholder has the freedom to carry out his or her work activities. Thereby, the model suggests that these core job characteristics affect work outcomes (e.g. job satisfaction, work effectiveness, reduced absence and reduced turnover) through the three critical psychological states; *experiences meaningfulness of work*, *knowledge of results of work* and *experienced responsibility for work outcomes* (Oldham & Hackman, 1976).

Enriched job design and IWB

The current study assumes that employees who engage in IWBs are those with high intrinsic motivation and that intrinsic motivation is the outcome of their perceptions of experiencing enriched job design (Whittington et al., 2004; Gagné, 2014). Consequently, the idea of enriched job design in the current study is that it contributes to experiencing meaningfulness of work, knowledge of results of work and experiencing responsibility for work outcomes. Furthermore, the Self-Determination Theory (SDT) further elaborates on the degree to which employees agree on their actions and engage in the actions with a full sense of choice (Gagné & Deci, 2005). In other words, SDT assumes when employees fulfil these psychological needs e.g., autonomy, relatedness and competence, they will be more active, and they will be inclined toward change and development. These psychological needs are consistent with the notion of job enrichment, thus the psychological needs and job enrichment both contribute to determining intrinsic motivation and contribute to influence employees’ behaviour in the workplace (Gagné, 2014). Accordingly, an employee’s perception of his or her job is considered as an important factor for his or her behaviour and attitude (van Woerkom, 2003). Thus, an employee who regards his or her job as enriched, is more likely to be intrinsically motivated to act in a given situation (e.g. innovative behaviour) (Hackman & Oldham, 1976; Gagné, 2014). As such, job enrichment leads to certain psychological states (e.g. experiences meaningfulness of work, knowledge of results of work and experienced responsibility for work outcomes), and these psychological states influence intrinsic motivation (Hackman & Oldham, 1976; Boonzaier et al., 2001; Gagné, 2014).

Moreover, the opportunity that the job gives for employees' intrinsic motivation determines the direction of their behaviour (van Woerkom, 2003). However, the willingness to engage in innovative behaviour and the ability to perform in an innovative course of action still needs to be uncovered. For example, Grant (2008) suggests that experiencing a job as meaningful enables employees to make a psychological link between their actions and the potential for a positive outcome for others. Grant (2008) also suggests that employees are more motivated to expand their effort when they recognize that their action can benefit others and they feel that they can make significant contribution to their work. Moreover, feedback from the job is reported to increase performance and reduces employee's sense of uncertainty at the workplace. Employees who receive signals regarding their performance from their job are more likely to regulate their behaviours towards more adaptive change-oriented action and they would be more willing to engage in innovative courses of action (Battistelli et al., 2013). In addition, job autonomy has been demonstrated to have the strongest impact on IWB (Ramamoorthy et al., 2005) For instance, job autonomy enables employees to generate different work approaches and methods, and supports employees in implementing ideas. Moreover, job autonomy also permits employees to find more efficient and effective ways of doing their work (Ramamoorthy et al., 2005; Hammond et al., 2011; de Spiegelare et al., 2014). As a result, there is a reason to believe that the motivational variables that promote proactive behaviour might be similar in promoting innovative behaviour, since taking charge is present in both concepts (Parker, 2000; Dorenbosch et al., 2005).

Consequently, the current study suggests that employees are willing to engage in IWB through the mechanism of flexible role orientation (Parker, 2000; Parker, Turner & Williams, 2006). Specifically, since the findings of Frese, Kring, Soose and Zempel (1996) support the idea that employees will attach positive action to taking charge (e.g. innovation) when they have a strong feeling of responsibility for work related-change, because this change triggers a sense of accomplishment and personal satisfaction. Therefore, researchers argued that flexible role orientation is similar to the concept of experiencing responsibility for work outcomes, which is present in the notion of job enrichment (Hackman & Oldham, 1976; Parker et al., 2006). In other words, employees' feeling of responsible for tasks and problem solving beyond their immediate operational tasks triggers motivation to innovate (Dorenbosch et al., 2005; Parker et al., 2006).

Theoretically, IWB may be explained by the notion that experiencing enriched job design is positively related to the motivation to feel responsible for the results of their job and act in a given situation (Parker, 2000; Gagné, 2014; Gieles et al., 2014). As such, enriched job design refers to the job as meaningful, employees feel that they make a difference that they would have

higher sense of personal responsibility for a broader range of goals, and they are aware of the final results of their efforts in helping achieve these goals (van Woerkom, 2003). In other words, the intrinsic motivation derived from enriched job design will stimulate employee's sense of responsibility to be more active and in turn to engage in IWB (Dorenbosch et al., 2005; Ramamoorthy et al., 2005; Battistelli et al, 2013). Therefore, the following hypothesis is proposed:

H1: *Employees experience of enriched job design is positively related to IWB.*

Affective commitment as a mediator

Previous studies showed that job design acts as an antecedent of organizational commitment, especially affective commitment (Slattery et al., 2010; Gillet & Vandenberghe, 2014). Affective commitment is defined as an employee's positive emotional attachment, identification, and involvement in the organization, thus an employee who commits to the organization because he or she "wants to", shows affective commitment (Allen & Meyer, 1990; Meyer, Stanley, Herscovitch & Topolnytsky, 2002). For instance, Joo and Shim (2010) showed that motivation derived from jobs that cover a wide range of task variety and task significance was positively related to affective commitment. Similarly, Fairlie (2011) presented that meaningful job characteristics are associated with strong affective commitment. Meyer and colleagues (2004) also showed that employees who experience autonomy at work are likely to develop a strong affective attachment to the organization. Therefore, the motivation derived from enriched job design (feedback, meaningfulness and autonomy) supports the bases for the development of affective commitment and this motivation contributes to the likelihood that employees will become involved in a course of action (Bono & Judge, 2003). As a result, organizations stand to benefit from having a committed workforce (Gagné, 2014).

The theoretical understanding of the relationship between job enrichment and affective commitment is supported with the Social Exchange Theory (SET) of Blau (1964). The basic notion of SET is "the normative principle of reciprocity or the exchange of favours, which shapes individual behaviour, attitude, and actions in a social interaction" (Slattery et al., 2010, p.1544). Turning to the current study, experiencing enriched job design is perceived by the employee as valuable, and in turn they will be motivated to return this favour through affective commitment. Thus, enriched job design instils more intrinsic motivation (Hackman & Oldham, 1976), and in turn stronger affective commitment (Meyer et al., 2002). Therefore, the current study assumes employees who experience enriched job design will be motivated to positively adapt their attitudes towards the organization, will increase their desire to remain with the organization and

will identify strongly with the goals and values of the organization because they want to. Therefore, the following hypothesis was constructed:

H2: Enriched job design is positively related to affective commitment.

Much research has investigated the relationship between affective commitment and positive work-related behaviours such as: job performance, proactive behaviour and organizational citizenship behaviours (e.g. OCB) (Meyer & Herscovitch, 2001; Parker et al., 2006; Jafri, 2010). The nature of affective commitment (i.e. emotional attachment) increases an employees' effort to behave on behalf of the organization (Allen & Meyer, 1990). For instance, O'Reilly and Chatman (1986) showed that employees' psychological attachment based on their identification with the organization predicted extra-role behaviour. Similarly, Slattery et al. (2010) found that employees who are emotionally attached to their organization are those who engage in an extra-role or proactive behaviour. In contrast, some studies argued that IWB is similar to OCB or may even be considered as a type of OCB (Ramamoorthy et al., 2005). Thereby, affective commitment is positively related to IWB, since IWB is also comprehended as a discretionary behaviour or as an extra-role behaviour (Dorenbosch et al., 2005).

From an SET perspective, employees who perceive that they are valued and respected are more likely to reciprocate a positive attitude toward the organization and will be prone to enhance desired work outcomes (e.g. innovative behaviour). In other words, enriched job design is considered as a perceived benefit for employees, therefore employees will reciprocate that benefit, for instance through affective commitment and IWB. The more enriched the job, the higher the affective commitment and the greater the likelihood to exhibit IWB. With this said, the current study expects to observe a direct positive effect of affective commitment on IWB (Jafri, 2010). IWB is expected to be indirectly affected by job enrichment through affective commitment. Consequently, the following hypotheses have been derived:

H3: Affective commitment is positively related to IWB.

H4: The positive relationship between enriched job design and IWB is mediated by affective commitment.

The moderating role of transformational leadership

Employees' affective commitment is assumed to have more impact on IWB when employees experience an open and supportive environment (Hammond et al., 2011). Leadership is one of the most important factors of a supportive environment (Wang & Walumbwa, 2007). For instance, studies showed that leaders activate an intrinsic value and motivate employees' desire to perform

beyond expectations (Avolio et al., 2004). Specifically transformational leadership is expected to have a positive influence on affective commitment and leads to enhance work related outcomes (e.g. innovative behaviour) (Henkin & Holliman, 2009; Hammond et al., 2011). Transformational leadership is defined as “behaviours of leaders who motivate followers to perform and identify with organizational goals, interests, and who have the capacity to motivate employees beyond expected levels of work performance” (Sarros, Cooper & Santora, 2008, p.146). Moreover, transformational leaders are also supportive of their subordinates and take action in helping their subordinates to develop their competencies and exceed their self-interests toward the attainment of collective goals (Gillet & Vandenberghe, 2014). Previous studies showed a positive relationship between transformational leadership and work-related behaviours and attitudes, such as job satisfaction, affective commitment and performance (Albrecht, 2005; Bass & Riggio, 2006; Ayree, Walumba, Zhou & Hartnell, 2012; Kim, 2014; Gagné, 2014). In addition, studies also found positive results between transformational leadership and IWB (Reuvers et al., 2008; Gillet & Vandenberghe, 2014). Thus, evidence supports transformational leadership as a salient factor for an employee’s affective commitment and IWB.

Therefore, there is a reason to believe that the extent to which employees’ affective commitment enhances IWB is dependent on the level of transformational leadership they experience. Especially, since Shamir et al. (1993) suggested that transformational leaders are able to influence subordinate commitment by promoting higher levels of intrinsic values associated with desired work outcomes (e.g. innovative behaviour). Furthermore, transformational leaders emphasized the linkages between subordinates’ effort and work outcomes by creating a higher level of personal commitment in the part of the leader and subordinate to a common vision, mission and organizational goals (e.g. innovation) (Bono & Judge, 2003; Avolio, Zhu, Koh & Bhatia, 2004). Likewise, transformational leaders lead to an increased sense of an employee’s attachment toward the organization and motivate employees to do more than what is expected (Reuvers et al., 2008; Ayree et al., 2012). Moreover, the influence of inspirational motivation of transformational leadership also contributes to transforming or changing subordinates’ basic beliefs in their abilities and attitudes of how they feel about themselves (Wang & Walumbwa, 2007; Sarros et al., 2008). In turn, employees are more likely to engage in innovative behaviours (Oldham & Cumming, 1996; Reuvers et al., 2008). In other words, employees of transformational leaders would feel more confident and aware about their abilities to successfully implement their competencies and to exhibit more IWB, because their supervisor is supportive of their interest and values toward the organization to engage in innovative behaviour (Reuvers et al., 2008;

Gagné, 2014). Therefore, the current study considers transformational leadership as an important moderator on the relationship between affective commitment and IWB.

The current study predicts that the level of transformational leadership that an employee’s experience strengthens an intrinsic value and motivates an employee’s desire to perform beyond expectations and therefore an employee’s affective commitment is assumed to be stronger on IWB. Thus, the effect of affective commitment on IWB will be strengthened when transformational leadership is high and a less strong effect when transformational leadership is low. The following hypothesis has been formulated:

H5: *Transformational leadership strengthens the relationship between affective commitment and employees IWB.*

It is expected enriched job design positively influences affective commitment and in turn affective commitment positively impacts IWB. The current study assumes that transformational leadership moderates the positive indirect effect of job enrichment on IWB through affective commitment, in such a way that the indirect effect of job enrichment through affective commitment is stronger when employees’ perceive high transformational leadership and less strong effect when employees’ perceive low transformational leadership. To test the moderation-mediation model a final hypothesis is formulated. Figure 1 presents the conceptual model with the relevant variables.

H6: *Enriched job design and IWB are mediated by affective commitment and transformational leadership moderate the relationship between affective commitment and IWB.*

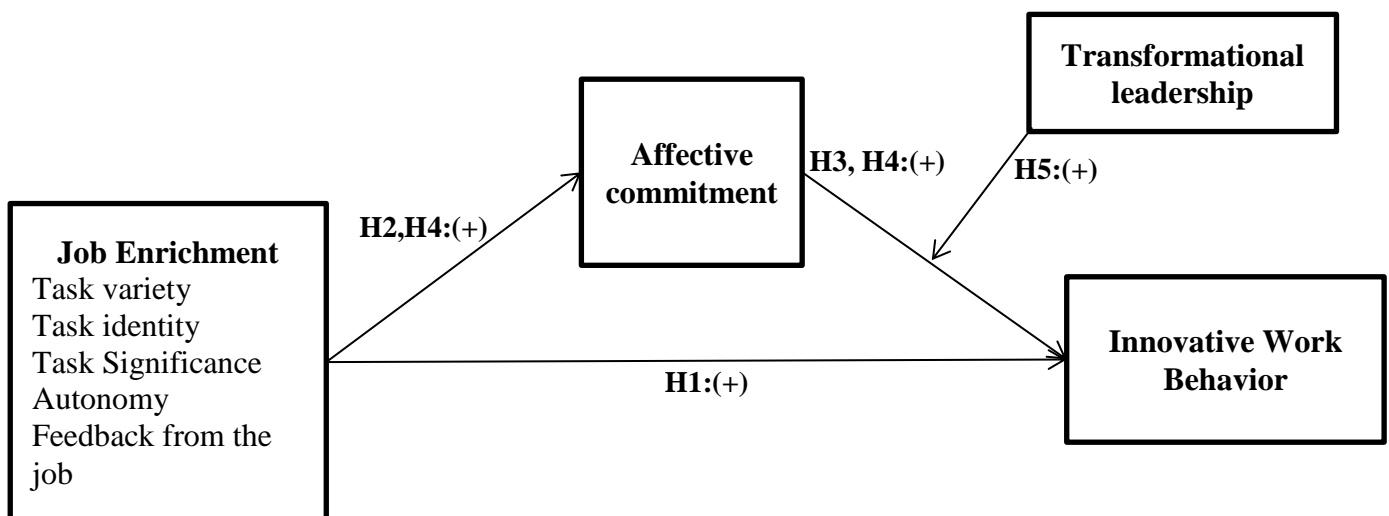


Figure 1: Conceptual model

Method

Research design

An explanatory research design was executed in order to test the hypotheses and to answer the stated research question and sub-question. The current study collected data from employees within different organizations and industries, such as the financial services, healthcare, manufacturing, hospitality and telecommunications. A cross-sectional approach was chosen for its practical way to collect data at one period of time and the aim of the current study was to collect as many participants as possible. Therefore, a convenience-sampling method was used among the employees of Aruba and the Netherlands.

Procedure

Data collection was conducted by two master students of the Human Resources Studies Master's Program at Tilburg University. Prior to data collection, the two master students designed a collective questionnaire of the relevant variables. The questionnaires were published in Dutch and in English. A pilot testing was carried out to control for ambiguous questions and it revealed the maximum time needed to complete the questionnaire. Both students were responsible for collecting a minimum of 100 participants. Hereafter, each student contacted several organizations to consent to this research. After receiving the consent of several organizations, a representative of their Human Resources department made the selection of the employees or department based on time and availability or let the selection depend on the willingness of the employees. Furthermore, individuals from the private network of the researchers who were willing to participate were also contacted. Half of the data was collected with digital questionnaires (51%) and the other half was collected with paper-based questionnaires (49%). All Dutch participants received a link for the digital questionnaire via mail. The participating Aruban organization, the participants received a questionnaire envelope. The envelope contained the questionnaire and the cover letter; explaining detail instruction regarding the completion of the questionnaire and contact information of the researchers. In both questionnaires the anonymity of the participants' responses was guaranteed.

Sample

The total amount of 292 respondents was collected for the analysis of the current study. The sample consisted of 48.9 % of Aruban respondents (N=143) and 51% of Dutch respondents (N=149). However, the Aruban sample reported a higher percentage for female (66.2%) respondents and the Dutch sample reported a higher percentage for male (66.4%) respondents. The Central Bureau of Statistics (CBS) shows an average percentage of 47.5% for male and

52.5% for female in Aruba (CBS, 2015) and 49.5% for male and 50.5% for the female in the Netherlands (CBS, 2015). Therefore, the results in terms of gender in the Dutch sample were regarded as unrepresentative. In contrast, the average age of the participants was 40.3 years ($SD = 12.55$) with a range from 19 to 72 years and the average age presented by CBS for both countries was 42.1 years (CBS, 2014; CBS, 2010). Next, the education level of the current sample consisted of 50.1% high educated employees (HBO=35.5%, University=14.6%) and of 49.8% low educated employees (MBO=31.8%, Secondary school=17.4%). Based on the figures of CBS of both countries, the average level of education is lower than the current sample (CBS, 2014; CBS, 2010). Finally, the average job tenure that an employee was employed in an organization was of 1-5 years ($M = 2.87$, $SD = 1.24$).

Measures

Innovative work behaviour (IWB)

The dependent variable was measured using the ten-item scale of de Jong and den Hartog (2010). The response format was on a five-point Likert scale and the answer categories ranged from “never” to “always”. An example item was “I wonder how things can be improved” and the participants were asked to rate themselves to the extent to which they display the described behaviours. All items were included in a Principal Component Analysis (PCA) with Oblimin rotation, to ensure whether underlying constructs for sets of items exists. The Factor Analysis revealed a single-factor solution, eigenvalue=5.861, with KMO of .924 (>.6) and Barlett’s test of sphericity was significant ($\chi^2=1766.688$, $df=45$). The reliability of the scale was very good ($\alpha=.921$). The Cronbach’s Alpha if –item-deleted of the first item (.922) was exceeding the Cronbach’s Alpha of the overall scale. However, the marginal difference ($\Delta\alpha=.01$) and considering the theoretical underpinning of the scale, this item was not deleted from the scale. Appendix A presents the questionnaire that was used to measure the constructs in the current study. Appendix B presents the factor analysis of each of each construct.

Job enrichment

The independent variable was measured using the work design questionnaire (WDQ) by Morgeson and Humphrey (2006) and the Questionnaire on the Experience and Evaluation of Work 2.0 (QEEW 2.0) by van Veldhoven, Prins, van der Laken and Dijkstra (2015). The WDQ measured the core job characteristics i.e. task variety, task identity and task significance with four items and feedback from the job with three items. The response format was on a five-point Likert scale and the answer categories ranged from “strongly disagree” to “strongly agree”. The scale of ‘independence in the job’ from the originating scale of QEEW 2.0 was used to measure job

autonomy with four items. The response format was on a four-point Likert scale and answer categories ranged from “never” to “always”.

All 19 items were included in the PCA and the Factor Analysis presented a five-factor solution, clearly measuring each job characteristic. However, the result demonstrated a violation of the simple structure, as shown in Appendix B, one item loads with two factors. The items that are violating the simple structure can be removed. However, item removal might be problematic because item removal would lead to a model with insufficient items to explain the factor. Therefore, the current study decided to retain all items in the scales because of sampling adequacy. The α -levels for each of the five job characteristics were (variety=.89; identity=.85; significance=.84; feedback=.84; autonomy=.81).

Hereafter, the job characteristics were averaged into a single index and these indexes were used to form the Motivational Potential Scores (MPS) as suggested by Hackman and Oldham (1976): $MPS = (\text{task variety} + \text{task identity} + \text{task significance}) / 3 * \text{autonomy} * \text{feedback}$. According to Hackman and Oldham, the overall potential of a job (e.g. job enrichment) is evaluated by the MPS score. However, the foundation of this multiplicative formula is not clearly stated in the literature (Boonzaier, et al., 2001) and therefore one could argue whether the MPS is a better summary of the core characteristics than a simple additive index (Fried & Ferris, 1987). Despite that the simple additive index is recommended, the current study still chooses the MPS for the construct of job enrichment. The scale reliability could not be obtained for the construct of job enrichment as result of its multiplicative composition.

Affective commitment

The mediator variable was measured using the six items scale of Meyer et al. (1993). Participants were asked to rate their answers on the extent to which they agree or disagree with the statements. The response format was on a five-point Likert scale and the answer categories ranged from “strongly disagree” to “strongly agree”. Three items were reversed since they were negatively formulated. An example item was “I really feel as if this organization’s problems are my own.” Factor analysis presented a single-factor solution, eigenvalue=3.528, with KMO of .849 (>.6) and Barlett’s test of sphericity was significant ($\chi^2 = 774.828$, $df = 15$). The Cronbach’s Alpha of the scale was .854 ($\alpha = .85$) which is similar to the Cronbach’s Alpha of previous study ($\alpha = .85$) (Meyer et al., 1993).

Transformational Leadership

The moderator variable was measured using the six items scale by Carless, Wearing and Mann (2000). Participants were asked to rate their answers on the extent to which they agree or disagree

that their direct supervisor displayed the described behaviours. The response format was on a five-point Likert scale and the answer categories ranged from “strongly disagree” to “strongly agree”. All items started with “my supervisor...” and an example item was “... communicates a clear and positive vision of the future.” Factor analysis presented a single-factor solution, eigenvalue=4.488, with KMO of .908 (>.6) and Barlett’s test of sphericity was significant ($\chi^2=1342.398$, $df=15$). The Cronbach’s Alpha of the scale was very good .932 ($\alpha=.93$) for the six-item.

Control variables

The current study used a total of five control variables: educational level, job tenure, age, gender and country. First, in previous studies significant results were found for educational level and job tenure on affective commitment or IWB (Dorenbosch et al., 2005; Kim, 2014). High educated employees are more likely to engage in IWB than low educated employees (Dorenbosch et al., 2005; de Spiegelaere, Gyes & van Hootegem, 2012). Employees with high job tenure will be more emotionally attached to their organization than employees with low job tenure (NG & Feldman, 2011; Kim, 2014). Second, although previous studies did not report any significance results of age and gender on the dependent variables (Dorenbosch et al., 2005; Battistelli et al., 2013; Kim, 2014) these were still included in the current study to check for the existence of spurious correlation. Finally, country was also included since national culture may also influence the results (Hofstede, Hofstede & Minkov, 2010).

Statistical analysis

All questionnaires were inspected for completeness and were imported in SPSS for screening and data cleaning. The data was checked for errors (minimum and maximum values), outliers and missing values. The missing values were recoded “-99” and “exclude cases listwise” option was set in order to work with complete and consistent information on the variables. Subsequently, the validity and reliability of the scales were assessed and the multicollinearity assumption was also examined using Pearson correlation analysis. Multicollinearity advocates that very high correlation between each independent variable in the same study can be threatening. Therefore, the cut-off point was used to evaluate the presence of multicollinearity, by evaluating the tolerance value of less than .10 or the Variance inflation factor (VIF) value above 10 (Pallant, 2013). The current study did not report multicollinearity between the independent variables.

The procedures of the resampling bootstrap process macro method of Hayes (2013) were applied to investigate the mediation effect in the current study. The simple mediation model number 4 was used to assess hypotheses 1 to 4 since these examine the relationship between job

enrichment and IWB mediated by affective commitment. First, the direct effect was estimated by how much job enrichment differs on IWB, independent of the effect of affective commitment on IWB. Next, the indirect effect was the product of the effect of job enrichment on affective commitment which in turn affects IWB. Final, the total effect was the sum of the direct and indirect effect of job enrichment on IWB. Moreover, the resampling bootstrap process macro method was chosen to allow a better inferential test about the indirect effect. This method makes better assumptions “about the shape of the sampling distribution of the indirect effect” (Hayes, 2012, p.6). The current study used 1000 as the number of bootstraps resample and a level of 95 for the confidence interval.

To examine transformational leadership as a moderator on the relationship between affective commitment and IWB, model number 1 of Hayes (2013) was executed. In this step, transformational leadership was examined without the indirect effect of job enrichment through affective commitment. Thus, the interaction effect of transformational leadership was examined to assure whether transformational leadership strengthens the relationship between affective commitment and IWB. Hereafter, the moderated mediation of the proposed model was tested. The proposed model is equal to the process model number 14 presented by Hayes (2013). Thus, the estimation and inference of the effect of job enrichment on IWB, through affective commitment, depending on transformational leadership was tested. This model denotes two linear models, one with affective commitment as the outcome and one with IWB as the outcome.

Results

Descriptive statistics

Table 1 displays the means, standard deviations, and correlations among all variables. The high scores of job enrichment are because of its multiplicative computation as explained in the method section. Results shows that job enrichment is significant positive correlated with affective commitment ($r = .44, p < .01$) and IWB ($r = .55, p < .01$). Moreover, there is a less strong positive relationship between affective commitment and IWB ($r = .22, p < .01$). However, the moderator transformational leadership shows no significant correlation with IWB, whereas it is positively related with job enrichment ($r = .31, p < .01$) and affective commitment ($r = .44, p < .01$). The only control variable that shows significant correlation with the dependent variable was country ($r = -.43, p = < .01$). This result suggests that employees from the Netherlands show less IWB than the employees from Aruba. The findings also showed that country and education level were significantly correlated ($r = .29, p = < .01$), which suggests that the education level of the Netherlands is higher than the education level of Aruba.

Table 1. Descriptive statistics and correlations among the variables

Scale	M	SD	1	2	3	4	5	6	7	8	9
1 Innovative Work Behaviour	3.59	.70	-								
2 Job Enrichment	44.12	18.71	.55**	-							
3 Affective Commitment	3.66	.81	.22**	.44**	-						
4 Transformational Leadership	3.61	.84	.12	.31**	.42**	-					
5 Gender	0.47	-	-.07	-.03	.05	.06	-				
6 Country	0.48	-	-.43**	-.31**	.00	.05	.31**	-			
7 Educational level	0.49	-	.08	.01	-.03	.00	.17**	.29**	-		
8 Job tenure	0.70	-	-.08	-.16**	-.18**	.01	.02	.08	.11	-	
9 Age (years)	39.88	12.43	-.02	.18**	.20**	-.05	-.07	.01	-.13*	-.52**	-

Note: $N = 273$, with listwise deletion of missing values. Each component of the MPS measure for job enrichment is reported in the Method section.

Gender was coded by 1=male and 0=female. Country was coded by 1=The Netherland and 0=Aruba. Educational level was coded 1=High and 0=Low.

Job tenure was coded 1= less than 10 years and 0= >10 years

* $p < 0.05$ (2-tailed); ** $p < 0.01$ (2-tailed)

Hypotheses testing

The indirect effect of job enrichment on IWB, through affective commitment, was examined with the simple mediation model number 4 of Hayes (2013). The unstandardized coefficients (B) obtained from the bootstrap method are summarized in Table 2. The direct effect of job enrichment on IWB (c'-path) shows a significant result ($B=.02, p < .001$). Thus, hypothesis 1 which states employees experience of enriched job design is positively related to IWB was confirmed.

Next, the simple mediation model also tested the direct effect of job enrichment on affective commitment (a-path) and is also presented in Table 2. The result confirms a positive significant effect of job enrichment on affective commitment ($B=.02, p < .001$) and a significant effect was found for the control variable, country ($B=.27, p < .05$). The finding implies that employees who experience job enrichment would be motivated to reciprocate a positive attitude and are emotionally attached toward the organization. Hypothesis 2 expected that job enrichment would be positively related to affective commitment. Consequently hypothesis 2 was confirmed. Moreover, Dutch employees experience more job enrichment as well as affective commitment than the Aruban employees.

Furthermore, Table 2 also presents the result of the relationship between affective commitment and IWB ($B=.040, ns$), which is equal to the b-path. There is no relationship between affective commitment and IWB when controlling for job enrichment. Finally the result shows that there is no indirect effect of job enrichment through affective commitment on IWB ($B=.000, ns, LLCI = -.001, ULCI = .003$). Thus, hypothesis 3 which states affective commitment is positively related with IWB was not supported. Hypothesis 4 which states that affective commitment mediates the relationship between job enrichment and IWB was also not supported. Thus, affective commitment does not add more to the explanation of IWB when controlling for all other variables.

Table 2. Result of the mediating effect of affective commitment between job enrichment and IWB

Antecedents	Consequent							
	M (Affective commitment)			Y (IWB)				
		Coeff.	SE	p		Coeff.	SE	p
X (Job enrichment)	a1	.02	.00	.000	c'	.02	.00	.000
M (Affective commitment)		-	-	-	b1	.04	.05	.391
Gender		.050	.09	.589		.02	.07	.830
Country		.27	.10	.009		-.48	.08	.000
Educational level		-.12	.09	.215		.23	.07	.001
Job tenure		-.14	.11	.203		-.06	.08	.480
Age		.00	.00	.306		-.01	.00	.069
		$R^2=.24$				$R^2=.42$		
		$F(6,267)=13.914, p < .001$				$F(7,266)=26.973, p < .001$		
		Coeff.	SE	LL 95% CI		UL 95% CI		
Bootstrap results of the indirect effect								
Affective commitment		.000	.000	-.001		.003		

Note: N= 274; LL= lower limit; CI= confidence interval;UL= upper limit; number of bootstrap:1000.

The interaction effect of transformational leadership was tested on the relationship between affective commitment and IWB without controlling for the effect of job enrichment. The interactive effect was investigated with the bootstrap method with the SPSS application of model 14 of Hayes (2013). The most striking results, as shown in the upper part of Table 3, indicate that without controlling for the effect of job enrichment there is a significant relationship between affective commitment and IWB ($B = .19, p < .001$) and a significant interaction effect ($B = .10, p < .05$). Thus, the finding presents different outcomes and suggests that transformational leadership significantly moderates the positive relationship between affective commitment and IWB when excluding the effect of job enrichment. Interestingly, the conditional indirect effect was insignificant at the low level ($B = .107, SE = 0.59, LLCI = -.009, ULCI = .224$), but was significant at the mean ($B = .191, SE = 0.52, LLCI = .089, ULCI = .292$) and high level ($B = .274, SE = 0.69, LLCI = .138, ULCI = .409$) of transformational leadership. Thus, a positive and strong relationship was found between affective commitment and IWB, when employees experience high level of transformational leadership. However, no relationship was found between affective commitment and IWB when employees experience low level of transformational leadership. Hypothesis 5 expected that transformational leadership would strengthen the relationship between affective commitment and IWB. Consequently, hypothesis 5 was confirmed. Moreover, the result suggests that Dutch employees exhibit less IWB than Aruban employees and high educated employees exhibit more IWB than low educated employees.

Table 3. Result of the moderating effect of Transformational leadership on the relationship between affective commitment and IWB

Antecedents		Consequent			
		Y (IWB)			
		Coeff.	SE	p	
X (Affective commitment)	b1	.19	.05	.000	
M (Transformational leadership)	b2	.06	.05	.241	
X * M	b3	.10	.05	.031	
Gender		.03	.08	.707	
Country		-.67	.08	.000	
Educational level		.28	.08	.000	
Job tenure		-.05	.09	.590	
Age		-.00	.00	.431	
		$R^2=.29$			
		$F(8,265)=13.656, p < .001$			
Conditional indirect effects at different levels of transformational leadership ($M \pm 1 SD$)		Bootstrapped Indirect effect	Boot SE	LL 95% CI	UL 95% CI
(-) 1 SD		.107	.059	-.009	.224
M		.191	.052	.089	.292
(+) 1 SD		.274	.069	.138	.409

Note: N= 274; SD= standard deviation; M= mean; LL= lower limit; CI= confidence interval; UL= upper limit; Number of bootstrap:1000

The results obtained and presented in the lower part of Table 3 were plotted in Figure 2. Thus, one slope of the moderating variable was plotted at one *SD* above the mean, and one slope of the moderating variable was plotted at one *SD* below the mean. As shown in Figure 2, when employees experience low transformational leadership ($-1 SD$), IWB decrease with a low level of affective commitment. In contrast, when employees experience high transformational leadership ($+ 1 SD$), IWB will increase with the enhancement of affective commitment.

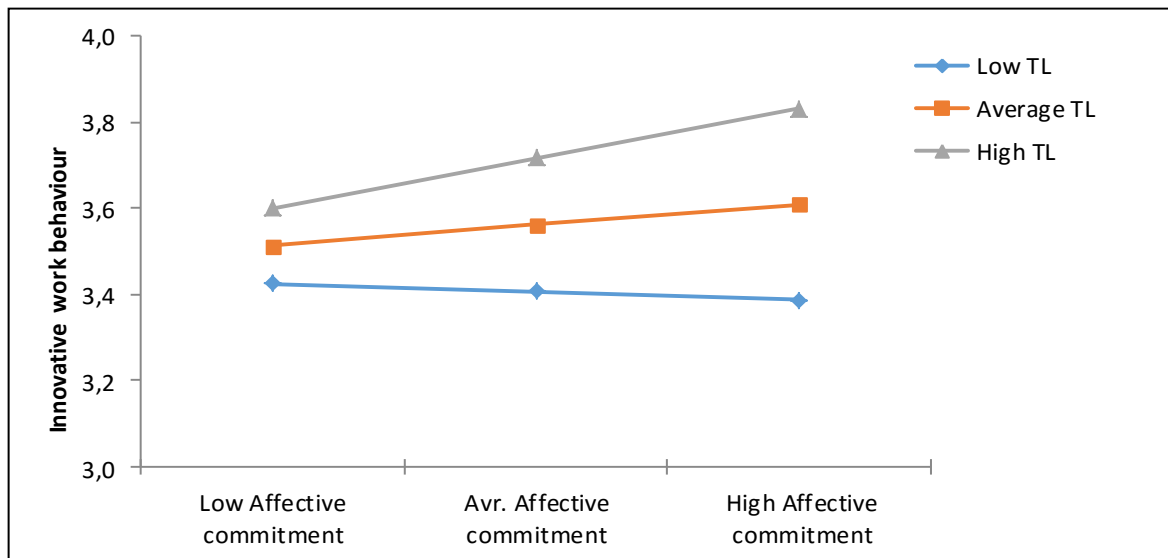


Figure 2: The interaction effect of transformational leadership on the relationship between affective commitment and innovative work behaviour.

Furthermore, hypothesis 6 stated that transformational leadership was expected to moderate the indirect effect of job enrichment through affective commitment on IWB, such that affective commitment has a stronger effect when transformational leadership is high and less strong when it is low. The moderation-mediation model was tested with model number 14 of Hayes (2013). The result of this moderated mediating model is presented in Table 4. The effect of transformational leadership on the relationship between affective commitment and IWB was not significant ($B=.06$, ns), because of the non-significant indirect effect of job enrichment through affective commitment on IWB. However, the effect of job enrichment remains significant on affective commitment ($B=.02$, $p<.001$) and on IWB ($B=.02$, $p<.001$). Overall, the current study did not support the interaction effect of transformational leadership nor did the current study support the mediation effect of affective commitment. The result of the lower limit confidence interval and the upper limit confidence interval confirmed that the conditional effects were not significantly different from zero ($LLCI= -.001$, $ULCI=.003$). Consequently, hypothesis 6 was not supported.

Table 4. Result of the conditional indirect effect of affective commitment and transformational leadership on IWB

Antecedents	Consequent							
	M (Affective commitment)			Y (IWB)				
		Coeff.	SE	p		Coeff.	SE	p
X (Job enrichment)	a1	.02	.00	.000	c'	.02	.00	.000
M (Affective commitment)		-	-	-	b1	.07	.05	.199
V(Transformational leadership)		-	-	-	b2	-.02	.05	.633
M * V		-	-	-	b3	.06	.04	.161
Gender		.05	.09	.575		.00	.07	.958
Country		.27	.10	.009		-.46	.08	.000
Educational level		-.11	.09	.224		.22	.07	.002
Job tenure		-.14	.11	.226		-.06	.09	.509
Age		.00	.00	.282		-.01	.00	.054
		$R^2=.24$				$R^2=.42$		
		$F(6,266)=13.890, p < .001$				$F(9,263)=21.156, p < .001$		

Note: N= 273; CI 95%; number of bootstrap:1000

Conclusion and Discussion

The current study formulated the following research question and sub-question: *'To what extent does affective commitment mediate the relationship between job enrichment and IWB?'* and *'To what extent does transformational leadership moderate the relationship between affective commitment and IWB?'*

The process macro bootstrap method supports the direct effect of job enrichment on IWB (H1). As expected, the analysis showed that enriched job design influences IWB and the Self-Determination Theory (SDT) further explains this finding. Thus, job enrichment fosters employees work motivation, employee's sense of responsibility, concern for work issues, and contributes to stimulate motivation to innovate. In other words, the result of the current study suggests that enriched job design broadens the concern for work issues beyond their traditional tasks and is reported as a condition to exhibit IWB. As a result, the current study contributes to the argument that job design is a key determinant in promoting the opportunity and motivation to exhibit IWB (Dorenbosch et al., 2005; Ramamoorthy et al., 2005; de Spiegelaere et al., 2012).

The current study showed that employees who perceived their job as enriched are more likely to report high levels of affective commitment (H2). Furthermore, the basic theoretical understanding of the social exchange theory (SET) explains this relationship. The result indicated that employees would be motivated to reciprocate a positive attitude when they perceive their job as favourable; in turn employees would be emotionally attached to their organization. The current study contributes to the understanding with regard to the modification in the design of job is

reported to have an impact on affective as well as behavioural outcomes (Morgeson & Campion, 2003).

Next, the analysis showed that the direct effect of affective commitment on IWB was not supported (H3) when controlling for job enrichment. Different explanation might be possible for the unsupported relationship of affective commitment with IWB. First, it might be related that more variance in IWB has been explained by job enrichment, which causes that there is less chance for affective commitment to account for additional variance that have not been already explained (Ferris & Gilmore, 1985; Evans, 1991). Next, the initial relationship was expected because affective commitment was extensively explored in relation with positive work-related behaviours (e.g. OCB) (Meyer et al., 2002; Jafri, 2010; NG & Feldman, 2011), and previous researchers suggested that IWB might be similar to OCB or even as type of OCB. These scholars argued that both concepts include the notion of doing more than is required (Dorenbosch et al., 2005; Ramamoorthy et al., 2005). However, the current study was unable to find a positive significant result, which adds to the debate that IWB and OCB might not be considered as similar, because OCB is not only wider than IWB but also the concepts are fundamentally different (de Spiegelaere et al., 2014). Finally, inferential fallacies might be another explanation for the unsupported relationship of affective commitment on IWB. For instance, Janssen, van de Vliert and West, 2004 suggested that within group participation fosters commitment and in turn the group is much more likely to work collaboratively toward innovative behaviours. However, given the fact that the current study combined the Aruban and Dutch sample and these were collected among different organization the results run the risk of inefficient parameter estimates (Hox & Kreft, 1994).

The current study was unable to support the indirect effect of job enrichment on IWB through affective commitment (H4). There could be different explanations for the insignificant result and it might be related with the aforementioned explanations. Thus, affective commitment did not have a unique contribution on IWB and would not contribute to further explanation in IWB when controlling for job enrichment. In addition, it might be possible that affective commitment might be collinear with the construct of job enrichment (Evans, 1991) which might influence the expected intermediate effect to result insignificant. In other words, it can be concluded that there might be an overlap between affective commitment and the idea of enriched job design (e.g. meaningfulness of work, knowledge of results of work and experienced responsibility for work outcomes). According to previous studies the motivation derived from job enrichment and commitment might be integrated to a common end (Gagné, 2014), since both constructs are regarded as energizing forces with implication for the behaviour (Meyer et al.,

2004; Gagné, 2014). Consequently, the overlap of the both constructs adds to the discussion regarding the understanding of the relationship motivation-commitment, which is that motivation and commitment both have their origins from a desire to understand, predict, and influence comprehensive behaviours. As a result, the intermediate effect of affective commitment between job enrichment and IWB shed light to new scientific evidence, because no known study have tested the mediating role of affective commitment in the context of IWB.

Furthermore, the current study found interesting results regarding the moderating role of transformational leadership on the relationship between affective commitment and IWB. The results showed that without controlling for the effect of job enrichment, the extent to which affective committed employees feel more confident and stimulated to exhibit more IWB is dependent on the level of transformational leadership they experience (H5). The reason behind this mechanism is because transformational leaders activate the desire of employee's personal values and goals which increases the chance that employees will attributes their behaviours and commit to a course of action (Bono & Judge, 2003) and in turn employees will engage to exhibit more IWB. However, under the condition of low level of transformational leadership and more affective commitment no significant effect was reported on IWB. A possible explanation for this might be for instance, employees who experience controlling leadership style would not be stimulated to engage in innovative behaviour (Ayree et al., 2012). Thus, a high interaction level of affective commitment and transformational leadership is likely to be more effective in enhancing employees' IWB. Overall, the current finding contributes to the field of transformational leadership as a key determinant of employees' affective commitment and innovative behaviours (Avolio et al., 2004; Wang & Walumbwa, 2007; Sarros et al., 2008).

The hypothesized moderation-mediation model was explored and a different result was obtained. The analysis showed that the indirect effect of job enrichment on IWB, through affective commitment did not strengthen when having a transformational leader (H6). Therefore, it can be concluded that the current study did not support the hypothesized model of transformational leadership to moderate the indirect effect of job enrichment through affective commitment on IWB. One possible explanation for the unsupported result might be related to the insignificant mediating role of affective commitment (H4). Thus, the energizing forces of job enrichment and affective commitment might have critical implication for the behaviour of the employee (Meyer et al., 2004; Gagné, 2014). Consequently, the overlap of both constructs influence the possible contribution of transformational leadership to further strengthen the effect of affective commitment to exhibit more IWB. Thus, the importance to clarify the distinction

between the motivation from job enrichment and affective commitment is increasing (Gagné, 2014), but also in relation with innovation and transformational leadership.

Finally, the control variables showed surprising results. The findings showed that the Dutch employees showed more affective commitment and less IWB and Aruban employees showed less affective commitment and more IWB. Moreover, the education level of the Dutch employees is higher than the education level of the Aruban employees and high educated employees are more likely to engage in IWB than low educated employees, according to previous studies (Dorenbosch et al., 2005; Spiegelaere et al., 2012). Therefore, the current study believes that these findings might be conflicting because it seems that that the high educated Dutch employees would exhibit more IWB than the high educated Aruban employees. A possible explanation for this result might be that Aruba's uncertainty-avoiding culture might influence their behaviour to be engage in innovative behaviour, because they feel threatened by uncertain or unknown situation (Janssen et al., 2004). Moreover, the above mentioned discussion regarding the overlap between the construct of affective commitment with job enrichment could also be the explanation of this finding.

Limitations and future research

The present study is not without its limitations. The first limitation regards to the type of index used for the construct of job enrichment. Ferris and Gilmore (1985) noted that the multiplicative nature of the motivating potential score (MPS) might influence the ability of the construct to detect other effects. The multiplicative index might also influence the ability of additional predictors in the model to account for additional variance not already explained in the criterion (Boonzaier et al., 2001). Although the current study reported significant results, still these results need to be interpreted with caution. Therefore, future research might consider different indexes of job enrichment to determine whether differences exist in their ability to explain other constructs, but also to clarify the exact composition of job enrichment.

Next, the current study theorized motivation derived from an enriched job design as a major explanatory mechanism in the effect that enriched job design leads to experiencing the critical psychological states and in turn these psychological states affect employee's behaviour (Gagné, 2014). However, the current study did not specifically observe the mediating processes of the psychological states. In other words, there were no observations in the current study that measures the presence of the psychological states, the complete mediation of these psychological states and their contribution on the relationship of each job characteristics with motivation to exhibit IWB (Organ, Podsakoff & MacKenzie, 2006). Therefore, it might be interesting for future research to replicate the current study, specifically measure the mediation effect of the

psychological states and to explore their contribution on the proposed relationships. Especially since previous studies indicated a partial mediation effect of the psychological states between the relationships of job characteristics-personal and work outcomes (Renn & Vandenberg, 1995) and also since previous studies argued that the critical psychological states are not necessary conditions for personal and work outcomes as proposed in the JCM (Boonzaier et al., 2001).

Furthermore, the use of cross-sectional data to assess the proposed model makes it difficult to determine the casual relationship among the variables. Besides, previous researchers have pointed out that reciprocal influences may exist between the variables of job enrichment and affective commitment (Mathieu, Hofman & Farr, 1993, Gagné, 2014). Future research may conduct a longitudinal design to clarify the casual relationship of the current variables and investigate their direction. Especially, the relation between the motivational potential of the job and affective commitment should be investigated, because there is still inconsistent consensus of their casual effect (Gagné, 2014).

Next, the current study might be confronted with the threat of common method variance (CMV) since all variables were obtained from the same source. For instance, the construct of job characteristics might be affected, because it is unclear how far the subjective perceptions of the employee will correspond to the objective situation of the job (Boonzaier et al., 2001; van Woerkom, 2003). This perception causes that employees will fall in the trap of social desirability (employees see themselves in a favorable light, regardless of their true feelings or behavior on the current matter). This effect can produce spurious relationships among the variables (Podsakoff, MacKenzie, Lee & Podsakoff, 2003). Therefore, it is recommended to use responses from different sources and observation to avoid CMV, but also since ratings of others may investigate distinctiveness of the dimensions of IWB (de Jong and den Hartog, 2010).

Finally, methodological problems may arise from this sample because the data was collected within the different organization and among different countries, which may lead to multilevel problems due to a nested sample (Hox & Kreft, 1994). For instance, the data was collected at the different level of analysis and was combined in a single statistical model. Consequently, the risk of incorrectly concluding that the effect is significant can be higher than the nominal level (α) (Hox & Kreft, 1994). Therefore, to reduce multi-level problems, it might be interesting to examine the within-participants variance and between-participants variance at each level of analysis (Anderson et al., 2014). Therefore, future research is needed to further investigate the compositional effect of the separate levels for job enrichment on IWB, through affective commitment and the moderating effect of transformational leadership by conducting a multi-level analysis separated by country.

Practical implications

The current study indicates the importance of studying linkages among different literature that contribute to the understanding of determinants and mechanism that engaged employees to exhibit IWB, and the study also offer practical implications. For instance, job enrichment has been long supported as job design intervention and IWB can be seen as its outcome (Dorenbosch et al., 2005). As a result, these actions can be facilitated by Human Resources (HR) practices (Buller & McEvoy, 2012).

Therefore, it is recommended that managers must focus on the HR practices within the performance management system; goal setting, performance appraisal, reward system and training and development (Cumming & Worley, 2015). In line with Cumming and Worley (2015), these advices are posed: managers must specify the desired performance (i.e. innovative behaviour) and assess these behaviours during the performance appraisal. Moreover, managers must discuss how employees might obtain the needed competencies to exhibit such behaviour and offer training and development that would be useful to build individuals' competencies. Finally, managers must provide rewards to ensure that innovative behaviour is repeated. Consequently, these HR practices influence employees understanding of the manner to contribute to an organization's strategic goals but also to work with the firm's needs. In turn, employees will adjust their behaviours accordingly, when these needs for change are stimulated and rewarded (Buller & McEvoy, 2012). In other words, employees will be motivated to contribute to organizational objectives if they believe that their actions are instrumental to secure valuable rewards, linked to the organization's success (Buller & McEvoy, 2012)

Furthermore, the current finding suggests that transformational leadership remains a salient contributor for employee's affective commitment to exhibit more IWB. In fact, research has showed that transformational leadership can be learned and training programs have been developed to increase leaders' efforts to increase transformational leadership (Pieterse, van Knippenberg, Schippers & Stam, 2010; Buller & McEvoy, 2012). Thus, with policies and training organizations can create and sustain affective commitment to ensure desired results among their employees, with the support of the leaders. Consequently, employees would be confident and determined to engage more in innovative behaviour (Reuvers et al., 2008). The current study hopes to shed light and to encourage future researchers on the impact of job enrichment as a keystone toward the innovative behaviour of the employee and the critical role of transformational leadership.

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Appendix A: Questionnaire

Innovative Work Behavior - De Jong & Den Hartog (2010).

1=Never, 2=rarely, 3=sometimes, 4=often, 5=always

1. I pay attention to issues that are not part of your daily work
2. I wonder how things can be improved
3. I search out new working methods, techniques or instruments
4. I generate original solutions for problems
5. I find new approaches to execute tasks
6. I make important organizational members enthusiastic for innovative ideas
7. I attempt to convince people to support an innovative idea
8. I systematically introduce innovative ideas into work practices
9. I contribute to the implementation of new ideas
10. I put effort in the development of new things

Job design characteristics

Job autonomy - van Veldhoven, Prins, van der Laken & Dijkstra (2015)

1=Always, 2=Often, 3=Sometimes, 4=Never

1. Do you have freedom in carrying out your work activities?
2. Can you decide how your work is executed on your own?
3. Can you personally decide how much time you need for a specific activity?
4. Can you organize your work yourself?

Task variety - Morgeson & Humphrey (2006)

1=Strongly disagree, 2=disagree, 3=neutral, 4=agree 5=strongly agree

1. The job involves a great deal of task variety.
2. The job involves doing a number of different things.
3. The job requires the performance of a wide range of tasks.
4. The job involves performing a variety of tasks.

Task identity

5. The job involves completing a piece of work that has an obvious beginning and end.
6. The job is arranged so that I can do an entire piece of work from beginning to end.
7. The job provides me the chance to completely finish the pieces of work I begin.
8. The job allows me to complete work I start

Task significance

9. The results of my work are likely to significantly affect the lives of other people.
10. The job itself is very significant and important in the broader scheme of things.
11. The job has a large impact on people outside the organization.
12. The work performed on the job has a significant impact on people outside the organization.

Feedback from the job

13. The work activities themselves provide direct and clear information about the effectiveness (e.g., quality and quantity) of my job performance.
14. The job itself provides feedback on my performance.
15. The job itself provides me with information about my performance.

Affective commitment – Meyer, Allen & Smith (1993)

1= Strongly disagree, 2=disagree, 3=neutral, 4=agree, 5=strongly agree

1. I would be very happy to spend the rest of my career with this organization.
2. I really feel as if this organization's problems are my own.
3. This organization has a great deal of personal meaning for me.
4. I do not feel a strong sense of "belonging" to my organization.
5. I do not feel "emotionally attached" to this organization.
6. I do not feel like "part of the family" at my organization.

Transformational leadership – Carless, Wearing & Mann (2000)

1=Strongly disagree, 2=disagree, 3=neutral, 4= agree, 5= strongly agree

1. My supervisor communicates a clear and positive vision of the future.
2. My supervisor treats staff as individuals, supports and encourages their development.
3. My supervisor gives encouragement and recognition to staff.
4. My supervisor fosters trust, involvement and cooperation among team members.
5. My supervisor encourages thinking about problems in new ways and questions assumptions.
6. My supervisor is clear about his or her values and practices what he or she preaches.

Appendix B: Factor Analysis

Table 5. Factor analysis Innovative Work Behaviour

Scale	IWB
IWB1- I pay attention to issues that are not part of your daily work	.586
IWB2- I wonder how things can be improved	.694
IWB3- I search out new working methods, techniques or instruments	.746
IWB4- I generate original solutions for problems	.711
IWB5- I find new approaches to execute tasks	.737
IWB6- I make important organizational members enthusiastic for innovative ideas	.825
IWB7- I attempt to convince people to support an innovative idea	.837
IWB8- I systematically introduce innovative ideas into work practices	.835
IWB9- I contribute to the implementation of new ideas	.830
IWB10- I put effort in the development of new things	.813
<i>Eigenvalue</i>	5.861
<i>Cronbach's α</i>	.921

Principal Component Analysis with oblimin rotation
Factor Loading <.30 are not displayed

Table 6. Factor analysis Affective Commitment and Transformational Leadership

Scale	Affective Commitment	Transformational Leadership
AC-1 I would be very happy to spend the rest of my career with this organization.	.677	
AC-2 I really feel as if this organization's problems are my own.	.645	
AC-3 This organization has a great deal of personal meaning for me.	.764	
AC-4 I do not feel a strong sense of "belonging" to my organization.	.842	
AC-5 I do not feel "emotionally attached" to this organization.	.865	
AC-6 I do not feel like "part of the family" at my organization.	.786	
TL-1 My supervisor communicates a clear and positive vision of the future.		.856
TL-2 My supervisor treats staff as individuals, supports and encourages their development.		.893
TL-3 My supervisor gives encouragement and recognition to staff.		.878
TL-4 My supervisor fosters trust, involvement and cooperation among team members.		.892
TL-5 My supervisor encourages thinking about problems in new ways and questions assumptions.		.802
TL-6 My supervisor is clear about his or her values and practices what he or she preaches.		.858
<i>Eigenvalue</i>	3.532	4.487
<i>Cronbach's α</i>	.85	.93

Principal Component Analysis with oblimin rotation
Factor Loading <.30 are not displayed

Table 7. Factor analysis Job Characteristics

Scale		Task significance	Job Autonomy	Task Variety	Task Identity	Feedback from the job
TS-3	The job has a large impact on people outside the organization.	.904				
TS-4	The work performed on the job has a significant impact on people outside the organization.	.899				
TS-1	The results of my work are likely to significantly affect the lives of other people.	.731				
TS-2	The job itself is very significant and important in the broader scheme of things.	.395		.379		
JA-2	Can you decide how your work is executed on your own?		.843			
JA-3	Can you personally decide how much time you need for a specific activity?		.838			
JA-4	Can you organize your work yourself?		.725			
JA-1	Do you have freedom in carrying out your work activities?		.693			-.307
TV-1	The job involves a great deal of task variety.			.901		
TV-2	The job involves doing a number of different things.			.886		
TV-3	The job requires the performance of a wide range of tasks.			.838		
TV-4	The job involves performing a variety of tasks.			.836		
TI-2	The job is arranged so that I can do an entire piece of work from beginning to end.				-.864	
TI-3	The job provides me the chance to completely finish the pieces of work I begin.				-.814	
TI-1	The job involves completing a piece of work that has an obvious beginning and end.				-.788	
TI-4	The job allows me to complete work I start				-.768	
FB-2	The job itself provides feedback on my performance.					-.826
FB-3	The job itself provides me with information about my performance.					-.802
FB-1	The work activities themselves provide direct and clear information about the effectiveness (e.g., quality and quantity) of my job performance.					-.727
<i>Eigenvalue</i>		6.120	2.383	2.305	1.587	1.130
<i>Cronbach's α</i>		.84	.81	.89	.85	.84

Principal Component Analysis with oblimin rotation

Factor Loading <.30 are not displayed

Appendix c: Hayes (2013) process macro bootstrap method

Simple mediation model 4

Run MATRIX procedure:

***** PROCESS Procedure for SPSS Release 2.11 *****

Written by Andrew F. Hayes, Ph.D. www.afhayes.com
Documentation available in Hayes (2013). www.guilford.com/p/hayes3

Model = 4
Y = IWB
X = Job_Enri
M = AC

Statistical Controls:
CONTROL= Dgender DCountry Educatio Dtenure AGE

Sample size
274

Outcome: AC

Model Summary

R	R-sq	F	df1	df2	p
,488	,238	13,914	6,000	267,000	,000

Model

	coeff	se	t	p	LLCI	ULCI
constant	2,601	,244	10,652	,000	2,121	3,082
Job_Enri	,020	,003	8,048	,000	,015	,025
Dgender	,050	,092	,541	,589	-,132	,231
DCountry	,265	,101	2,616	,009	,066	,464
Educatio	-,115	,092	-1,244	,215	-,297	,067
Dtenure	-,141	,111	-1,277	,203	-,359	,076
AGE	,004	,004	1,026	,306	-,004	,012

Outcome: IWB

Model Summary

R	R-sq	F	df1	df2	p
,644	,415	26,973	7,000	266,000	,000

Model

	coeff	se	t	p	LLCI	ULCI
constant	3,096	,222	13,961	,000	2,659	3,533
AC	,040	,047	,860	,391	-,052	,132
Job_Enri	,016	,002	7,694	,000	,012	,021
Dgender	,015	,070	,214	,830	-,123	,153
DCountry	-,477	,078	-6,110	,000	-,630	-,323
Educatio	,231	,071	3,275	,001	,092	,370
Dtenure	-,060	,084	-,707	,480	-,226	,106
AGE	-,006	,003	-1,824	,069	-,012	,000

***** DIRECT AND INDIRECT EFFECTS *****

Direct effect of X on Y

Effect	SE	t	p	LLCI	ULCI
,016	,002	7,694	,000	,012	,021

Indirect effect of X on Y

	Effect	Boot SE	BootLLCI	BootULCI
AC	,001	,001	-,001	,003

Normal theory tests for indirect effect (Sobel test)

Effect	se	Z	p
,001	,001	,849	,396

***** ANALYSIS NOTES AND WARNINGS *****

Number of bootstrap samples for bias corrected bootstrap confidence intervals:
1000

Level of confidence for all confidence intervals in output:
95,00

NOTE: Some cases were deleted due to missing data. The number of such cases was:

18

----- END MATRIX -----

Moderation model 1

Run MATRIX procedure:

***** PROCESS Procedure for SPSS Release 2.11 *****

Written by Andrew F. Hayes, Ph.D. www.afhayes.com
 Documentation available in Hayes (2013). www.guilford.com/p/hayes3

Model = 1
 Y = IWB
 X = AC
 M = TL

Statistical Controls:
 CONTROL= Dgender DCountry Educatio Dtenure AGE

Sample size
 274

Outcome: IWB

Model Summary

R	R-sq	F	df1	df2	p
,540	,292	13,656	8,000	265,000	,000

Model

	coeff	se	t	p	LLCI	ULCI
constant	3,876	,194	19,969	,000	3,493	4,258
TL	,057	,049	1,176	,241	-,039	,153
AC	,191	,052	3,690	,000	,089	,292
int_1	,099	,046	2,174	,031	,009	,189
Dgender	,029	,078	,376	,707	-,124	,183
DCountry	-,667	,081	-8,231	,000	-,826	-,507
Educatio	,282	,077	3,653	,000	,130	,434
Dtenure	-,050	,094	-,539	,590	-,235	,134
AGE	-,003	,004	-,789	,431	-,010	,004

Interactions:

int_1 AC X TL

R-square increase due to interaction(s):

	R2-chng	F	df1	df2	p
int_1	,013	4,726	1,000	265,000	,031

Conditional effect of X on Y at values of the moderator(s):

TL	Effect	se	t	p	LLCI	ULCI
-,841	,107	,059	1,809	,072	-,009	,224
,000	,191	,052	3,690	,000	,089	,292
,841	,274	,069	3,977	,000	,138	,409

Values for quantitative moderators are the mean and plus/minus one SD from mean.
 Values for dichotomous moderators are the two values of the moderator.

Data for visualizing conditional effect of X on Y:

AC	TL	yhat
-,813	-,841	3,426
,000	-,841	3,513
,813	-,841	3,601
-,813	,000	3,406
,000	,000	3,561
,813	,000	3,717
-,813	,841	3,387
,000	,841	3,610
,813	,841	3,832

Estimates in this table are based on setting covariates to their sample means

***** ANALYSIS NOTES AND WARNINGS *****

Level of confidence for all confidence intervals in output:

95,00

NOTE: The following variables were mean centered prior to analysis:

AC TL

NOTE: Some cases were deleted due to missing data. The number of such cases was:

18

----- END MATRIX -----

Moderation-mediation model 14

Run MATRIX procedure:

***** PROCESS Procedure for SPSS Release 2.11 *****

Written by Andrew F. Hayes, Ph.D. www.afhayes.com
 Documentation available in Hayes (2013). www.guilford.com/p/hayes3

Model = 14
 Y = IWB
 X = Job_Enri
 M = AC
 V = TL

Statistical Controls:
 CONTROL= Dgender DCountry Educatio Dtenure AGE

Sample size
 273

Outcome: AC

Model Summary

R	R-sq	F	df1	df2	p
,488	,239	13,890	6,000	266,000	,000

Model

	coeff	se	t	p	LLCI	ULCI
constant	-1,080	,249	-4,334	,000	-1,571	-,589
Job_Enri	,020	,003	8,032	,000	,015	,025
Dgender	,052	,093	,561	,575	-,130	,234
DCountry	,265	,101	2,613	,009	,065	,465
Educatio	-,113	,093	-1,219	,224	-,296	,070
Dtenure	-,136	,112	-1,215	,226	-,356	,084
AGE	,005	,004	1,077	,282	-,004	,013

Outcome: IWB

Model Summary

R	R-sq	F	df1	df2	p
,648	,420	21,202	9,000	263,000	,000

Model

	coeff	se	t	p	LLCI	ULCI
constant	3,251	,196	16,576	,000	2,865	3,637
AC	,065	,050	1,287	,199	-,034	,163
Job_Enri	,016	,002	7,424	,000	,012	,021
TL	-,022	,045	-,478	,633	-,111	,068
int_1	,058	,042	1,405	,161	-,023	,140
Dgender	,004	,071	,052	,958	-,136	,143
DCountry	-,456	,079	-5,750	,000	-,613	-,300
Educatio	,218	,071	3,056	,002	,077	,358
Dtenure	-,056	,085	-,661	,509	-,224	,111
AGE	-,006	,003	-1,935	,054	-,013	,000

Interactions:

int_1 AC X TL

***** DIRECT AND INDIRECT EFFECTS *****

Direct effect of X on Y

Effect	SE	t	p	LLCI	ULCI
,016	,002	7,424	,000	,012	,021

Conditional indirect effect(s) of X on Y at values of the moderator(s):

Mediator

	TL	Effect	Boot SE	BootLLCI	BootULCI
AC	-,843	,000	,001	-,002	,003
AC	,000	,001	,001	-,001	,004
AC	,843	,002	,002	,000	,006

Values for quantitative moderators are the mean and plus/minus one SD from mean. Values for dichotomous moderators are the two values of the moderator.

***** INDEX OF MODERATED MEDIATION *****

Mediator

	Index	SE(Boot)	BootLLCI	BootULCI
AC	,001	,001	-,001	,003

***** ANALYSIS NOTES AND WARNINGS *****

Number of bootstrap samples for bias corrected bootstrap confidence intervals:
1000

Level of confidence for all confidence intervals in output:
95,00

NOTE: The following variables were mean centered prior to analysis:

AC TL

NOTE: Some cases were deleted due to missing data. The number of such cases was:
19

----- END MATRIX -----