

Demographic Characteristics as Antecedents of Organisational Commitment

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Abstract: *The purpose of this study was to investigate employees' demographic characteristics as antecedents of organisational commitment. Using a combination of descriptive statistics and multiple regression analysis on data collected from a population of staff at CNG Rwanda, the study finds the following: Employees recorded high levels of organisational commitment. Age and gender significantly negatively affected overall organisational commitment, continuance and normative commitment, while marital status affected the same significantly positively. Work experience and duty station affected affective commitment positively but continuance commitment negatively. Employee's work location significantly affected continuance and normative commitments. Level of formal education insignificantly affected all types of commitment consistently. The findings imply that demographic characteristics played a significant role as antecedents of organisational commitment. Generalization of these findings is, however, limited to the studied organisation. It is therefore recommended that a bigger sample from a well-mixed set of organisations across Rwanda should be studied.*

Keywords: antecedents, demographic characteristics, organisational commitment, Rwanda

Introduction

Organisational commitment (OC) is an important concept in organisational psychology literature. However, the concept is arguably a very broad construct to have a single definition or an effective analysis of (Benkhoff, 1997). For example, Porter, *et al.* (1974) defines OC as "the strength of an individual's identification with, and involvement in a particular organisation" (p. 604). Attempts have been done to handle the broadness of the construct. Porter, *et al.* (1974), for example, identifies three components of OC as (i) the strong belief in organisation values and goals; (ii) the willingness to expend considerable effort for it; and (iii) the strong intent or desire to remain employed by the organisation. Later on, Meyer and Allen (1991) came up with three components; namely, the affective commitment (AC) which refers to the state in which an employee wants to stay with an organisation as a result of the "emotional attachment to, identification with and involvement in the organisation"; continuance commitment (CC) referring to the feeling of being stuck" and staying because it is too costly to leave; and normative commitment (NM) which refers to feeling of a moral obligation to stay with the organisation. However, it is the latter set of components which has dominated (and still is dominating) the assessment of OC to date.

Employees' commitment to organisations has attracted researchers' interest for decades. One of the reasons has been the belief and empirical evidence that it is an antecedent to several work behavioural outcomes such as productivity (Balfour and Wechsler, 1991) turnover and turnover intention (Angle and Perry, 1981), job performance (Abdul-Rashid *et al.*, 2003; Fu and

Deshpande, 2014), organisation citizenship behavior (Ibrahim and Aslinda, 2013), employees' absenteeism (Angle and Perry, 1981), among others. Another reason is connected to the idea that OC plays an important role in deciding the success or failure of the organisation (Fornes *et al.*, 2008; Viêt, 2015). Studies on OC are therefore of interest to organisations' stakeholders because it is an important variable in understanding the work behaviour of employees (Meyer and Herscovitch, 2001; Mowday *et al.*, 1979) and that it is a factor that links employees to the organisation (Meyer and Allen 1997 cited in Yahaya and Ebrahim, 2016).

One of the many strands of research in OC is the strand that focuses on its antecedents. Four groups of these antecedents have dominated the empirical analysis; namely, (i) personal characteristics (e.g., sex, personality factors); (ii) job characteristics (e.g., task significance, skill variety); (iii) work experiences (e.g., leader behaviours, organisational characteristics); and (iv) role related characteristics (e.g., role ambiguity, role conflict) (Mowday *et al.*, 1982 cited in Mathieu and Hamel, 1989). By understanding when and how commitment develops and how it helps shape attitudes and behaviours of employees, organisations will be in a better position to anticipate the impact such changes will have, and manage it more effectively (Meyer and Allen, 1997). Such benefits are even higher when managers know the level of employees' OC and the factors that drive its. One group of such factors is that of demographic characteristics.

Previous studies on demographic characteristics as determinants of OC have covered such characteristics as age, length of service (tenure), level of education, gender, marital status, job position and job location. The studies are many; but a few examples include: Affum-Osei *et al.* (2015), Al-Kahtan (2012), Allen and Meyer (1990), Amangala (2013), Angle and Perry (1981), Aven *et al.* (1993), Bakan *et al.* (2011); Choong *et al.* (2012), Cogaltay (2015), Dodd-McDuff, and Wright (1996), Iqbal *et al.* (2011), Jena (2015), Joiner and Bakalis (2006), Khalili and Asmawi (2012), Konya *et al.* (2016), Marsden *et al.* (1993), Mathieu and Hamel (1989), Mathieu and Zajac (1990), Meyer *et al.* (2002), Nifadkar and Dongre (2014), Pala *et al.* (2008), Pourghaz *et al.* (2011), Salami (2008), Steers (1997), Viet, (2015), among others. A number of these studies have been linked to both role and exchange theories. Yahaya and Ebrahim (2016), for example, cite the side bet theory of Becker (1960), which suggests that changes in factors like age, tenure, job position and roles, as well as differences in gender or marital status increase individuals' investment in, and cost associated with leaving, an organisation. The implication of this theory is that employee's OC would vary with demographic characteristics.

However, many of the aforementioned studies were carried out in the Western and Eastern economies with very few in Africa. Equally many were carried out in business organisations, educational institutions, medical, and other service organisations like banks. More importantly, these studies have produced disparate findings, opening up the debate as to whether the demographic characteristics can consistently explain the variations in employees' OC. Furthermore, it is argued in Viêt (2015) that prior research suggests the possibility that demographic factors may differentially relate to OC in a different setting. It is in this context therefore that the present study was carried out in order to contribute additional empirical evidence in this research front from a frontier market – Rwanda, using employees of a specially chosen organisation – The National Commission for the Fight Against Genocide (CNLG). Thus, the aim of the study was to assess whether, in such a context, OC would still be influenced by employees' demographic characteristics. Specifically, the study assessed the level of OC among employees of CNLG and determined the effect of demographic characteristics, namely gender, age, education, marital status, work experience and duty station on OC. Understanding the level of OC among these employees and its variability across

employees' groups based on their demographic characteristics would inform management's efforts to build a committed workforce consistent with the organisation's mission. Managers of similar organisations can also benefit from the results. The next section presents the study's context, followed by a literature review.

The study's context

CNLG is a Government organisation constitutionally created in 2008 following the Genocide perpetrated against Tutsi in Rwanda in 1994. It is a National Commission, an independent and permanent institution with legal status, as well as administrative and financial autonomy. It collaborates with the responsible Ministry in carrying out its mission to prevent, fight against genocide, and address its consequences both inside and outside the country through its attributions. Its structure, as well as some of its key functions, can be accessed on its website <http://www.cnlg.gov.rw/home/>. The organisation is headquartered near Chez Lando Hotel in Remera Sector, Gasabo District, Kigali City. It also operates a research centre in Kigali and coordination offices – one in every two districts totalling 15 district centres from the country's 30 districts. The research centre is responsible for the "Gacaca" documentation. CNLG has a workforce of 135 employees (68 at the headquarters, 35 at the research centre and 32 in the district centres). The nature of this organisation and its mission, imply that the society places high expectations on it to fulfil its mission by attaining high levels of organisational and functional outcomes. The society expects the organisation and the employees to be committed to preventing, fighting against genocide and addressing its consequences through the fulfilment of the attributions of the organisation.

Similarly, the nature of the organisation and the expectations placed upon it make it a natural avenue for studying OC because these expectations in many ways can be attained if employees are committed to the organisation and/or its goals. CNLG represents a public commission for a specific purpose as detailed here and it may call for different management strategies, hence a relatively unique environment for testing the hypothesized prediction of OC by demographic characteristics. It follows therefore that CNLG presents one such different settings to explore the effect of demographic factors on OC.

Literature review

Organisational commitment

Porter *et al.* (1974) define OC as "the strength of individual's identification with, and involvement in, a particular organisation" (p. 604). However, the concept of organisational commitment has evolved over time and in terms of perspectives. Early studies like those of Becker (1960) and Alluto *et al.* (1973) viewed organisational commitment as the binding of an individual to behavioural acts, a view referred to as behavioural perspective in the literature. This perspective was followed later by the attitudinal commitment perspective of Porter *et al.* (1974) in which organisational commitment was defined in three components, namely; (a) a strong belief in, and acceptance of, organisational goals and values; (b) a willingness to exert considerable effort on behalf of the organisation; and (c) a strong desire to maintain membership in the organisation. Later on, Meyer and Allen (1991) came up with three components; namely the affective commitment (AC) which refers to the state in which an employee wants to stay with an organisation as a result of the "emotional attachment to, identification with and involvement in the organisation"; continuance commitment (CC) referring to the "feeling of being stuck" and staying because it is too costly to leave (costs in terms of, for example, reduction in pay, pension, benefits, facilities, etc.); and normative commitment (NM) which refers to feeling of a moral obligation to stay with the organisation

which in turn could arise from work culture and other socially accepted norms. However, it is the latter set of components which have dominated (and still is), the assessment of OC to date. Moreover, of the three components, relatively less is known about NM and how it develops (Meyer and Allen, 1997 cited in Yahya and Ebrahim, 2016).

Demographic characteristics

Demography is the study of human population in terms of size, density, location, age, gender, race, occupation and other statistics (Kotler and Armstrong, 2014, p. 70). Thus, demographics are the quantifiable statistics of a given a population and are used to identify the study of quantifiable sub-set within a given population which characterize that population over a specific point in time. In the studies of the antecedents of employees' OC, employees' demographic characteristics are some of the most commonly used variables, but the results have so far been neither consistent nor conclusive. See, for example, Mathieu and Zajac (1990) and Al-Qarioti and Al-Enezi (2004).

The side-bets theory of organisational commitment

Becker (1960) described commitment generally as "a disposition to engage in *consistent lines of activity*" (p. 33) as a result of the accumulation of "side bets" (or investments) valued by the individual that would be lost or deemed worthless if the activity was to be discontinued. In this case, "consistent line of activity" refers to maintaining membership (i.e., employment) in the organisation. In Becker's (1960) own words;

"The man who hesitates to take a new job may be deterred by a complex of side-bets: the financial costs connected with a pension fund he would lose if he moved; the loss of seniority and "connections" in his present firm, which he promise quick advance if he stays; the loss of ease in doing his work because of his success in adjusting to the particular condition of his present job; the loss of ease in domestic living consequent on having to move his household, and so on..." (p. 38-39)

Ritzer and Trice (1969) reasoned that side bets should accumulate over time and that, age, therefore, should be the "best single indicator" (p. 476) of actions taken to stake something of value in the employing organisation. This was also supported by Alutto *et al.* (1973) who argued that there should be a strong positive relationship between age and the number of side-bets accrued in an employing system. Ritzer and Trice (1969) also connected the accumulation of side-bets with tenure. Through increased tenure, employees gain seniority and connection within the organisation making it more difficult for them to leave. Other researchers like Uraon *et al.* (2015) argue that the side bet theory suggests an inverse relationship between education qualification and OC due to the scarcity of career opportunities for less educated employees. In addition, they also argue that the side bet theory suggests that the married employees may be more committed to their organisation due to their responsibilities towards family and fear of losing the engagement in the employing organisation. It is also important to point out that side-bets theory would link to Meyer and Allen's (1991) definition CC than to the rest of the components. Thus, finding a relationship between age and tenure, for example, would indicate support to the side-bets theory. However, empirical evidence is divided, some lending support to it (e.g. Powell and Meyer, 2004), while others like Ritzer and Price (1969) finding evidence against the same.

Demographic characteristics and organisational commitment

Studies have investigated the influence of demographic characteristics on employees' OC over the years, but the results have not been consistent or conclusive. While some studies report that demographic variables such as age, tenure, education, gender and marital status played a significant role in enhancing employees side bets (Becker, 1960; Hrebiniak and Aluto, 1972; Stevens *et al.*, 1978), others report insignificant relationship between these variables and OC (Aven *et al.*, 1993; Ritzer and Trice, 1969). Moreover, other studies like Mottaz (1988) found that the influence of demographic variables was indirect through work reward and work values. The following subsections present the arguments, empirical evidence, and develop the respective hypotheses.

Gender and organisational commitment

Gender of employees has been active in the literature on antecedents of OC. Of interest, here is whether there are gender differences in OC, and the evidence so far is that female employees have recorded significantly higher levels of OC than their male counterparts. Among such studies are those of Aven *et al.* (1993) and Marsden *et al.* (1993). These two studies meta-analytically analyzed a number of researches in which these differences were reported. They attributed the differences to the idea that women face a significant number of challenges in getting jobs and also when they are on the jobs. These researchers, therefore, argue that there should be no such differences if both male and female employees are subjected to the same work settings and conditions. Contrarily, Dodd-MacCue and Wright (1996), using a sample of accountants and internal auditors in Canada, report lower commitment among female employees than their male counterparts. This study attributed these differences to a culture where male and female are given equal opportunities in education but not so in workplaces. However, in more recent studies (Khalili and Asmawi, 2012; Kónya *et al.*, 2016, Ling and Yuen, 2014), statistically insignificant gender differences in OC are reported. Consequently, the following is hypothesized in this study:

- H₁. Gender is not related to OC*
- H_{1(a)} Gender is not related to AC*
- H_{1(b)} Gender is not related to CC*
- H_{1(c)} Gender is not related to NC*

Age and organisational commitment

Age is expected to be related to OC – where generally employees' level of commitment is expected to increase as one gets older. Kitchen (1989) cited in Al-Kahtan (2012) associates this to the scarcity of alternative employment for older workers because many organisations are reluctant to hire older workers whose length of contribution to the organisation would necessarily be brief. Quite a number of studies have investigated this link over the years. Examples of such studies include Affum-Osei *et al.* (2015), Al-Kahtani (2012), Allen and Meyer (1990), Amangala (2013), Angle and Perry (1981), Azeem (2010), Dodd-MacCue and Wright (1996), Pourghaz *et al.* (2012), and Salami (2008). These studies covered many countries and industry subsectors in which age was captured either categorically or in number of years. Evidence in many of these studies indicates that age is significantly positively related to OC where older employees were more committed than younger ones. A few exceptions do exist. For example, Salami (2008) found no significant correlation between age and OC while Pourghaz *et al.* (2011) found AC in the 21 - 28 years old group of tour agency drivers to be higher than that of those in the 29 - 39 years old and ≥ 40 years groups. Pourghaz's *et al.* study also suggest that age may be linked differently to the different components of OC. It is therefore hypothesized that:

- H₂. Age is not related to OC*
H₂(a) Age is not related to AC
H₂(b) Age is not related to CC
H₂(c) Age is not related to NC

Level of education and organisational commitment

Studies investigating the effect of level of education on OC are many; examples of which include: Affum-Osei *et al.* (2015), Angle and Perry (1981), Bakan *et al.* (2011), Chughtai and Zafar (2006), Iqbal *et al.* (2011), Deen (2015), Joiner and Bakalis (2006), Mathieu and Zajac (1990), Nifadkar and Dongre (2014), Pala *et al.* (2008), Salami (2008), Steer (1977), just to mention a few. However, the evidence is as mixed as in the other demographic characteristics. Iqbal *et al.* (2011) report that the level of education has a significant negative impact on the commitment of a sample of 65 faculty members of five universities in the Kingdom of Saudia. Nifadkar and Dongre (2014) find a negative relationship between education and OC in a sample of 52 teachers of girls' college in India. Pala, *et al.* (2008), in a sample of health care staff reported that staff with technical school education qualification had lower OC than staff who had university degrees – bachelor, master or higher.

The negative relationship between OC and the level of education has been explained by various researchers. Examples of such explanations include (i) higher education levels increase external job alternatives (Mathieu and Zajac, 1990); (ii) higher level of education increases opportunities to change jobs (Chughtai and Zafar, 2006; Joiner and Bakalis, 2006); (iii) higher level of education makes an employees to develop more expectation from the organisation than it can provide, leading to lower commitment (Mowday *et al.*, 1982, cited in Mathieu and Hamel, 1989); and (iv) education is an individual investment which in turn encourages the individual to seek for better returns on investment by searching for better paying jobs (Al-Kahtani, 2004)

On the other hand, there are studies which have reported a positive effect of education level on OC See for example, Salimi (2008). Salami associated these results with the notion that employees with higher levels of education stand a chance to occupy higher job ranks leading to having more responsibilities which invariably require more commitment to the organisation. Significant differences in OC are also reported in a sample of 275 employees of the textile industry in Turkey by Bakan *et al.* (2011). In addition, Deen (2015) reports significant differences in each of the three types of OC between groups based on the level of education in a sample of 269 employees of a construction equipment manufacturing industries in Tamil Nadu. The present study, therefore, hypothesizes that:

- H₃ Level of education does not affect OC*
H_{3a} Level of education does not affect AC
H_{3b} Level of education does not affect CC
H_{3c} Level of education does not affect NC

Marital status and organisational commitment

Married employees have been shown to be more committed than those that are single. Said differently, employees' marital status has been shown to significantly positively predict their organisational commitment (Affumu – Osei *et al.* 2015; Angle and Perry, 1981; Mathieu and Zajac, 1990; Salami, 2008). Affumu – Osei *et al.*, for example using a sample of 206 employees in 10 branches of a commercial bank in Ghana, found that married employees were significantly more committed than their single and divorced counterpart. Similar results are reported in Salami (2008) on a sample of 320 employees from five services and five

manufacturing organisations in Oyo state in Nigeria, where the marital status of employees was found to be a significant positive predictor of their organisational commitment. Choong, *et al.* (2012) argue that married people crave for job stability and security due to their perceived responsibility for their families and as a result, their higher commitment comes from concern for the economic safety of their families. Angle and Perry (1983) associated this to the financial burden and family responsibility of married employees. Opposite findings are also reported. Joiner and Bakalis (2006) reported that married casual academicians in Australia were less committed as compared to their unmarried counterparts. In the middle are studies which report no effect of marital status on employee's organisational commitment (Çoğaltay, 2015; Chughtai and Zafar, 2006; Ghaffaripour, 2015). Çoğaltay, 2015 for example, reviewed meta-analytically studies carried out on teachers in Turkey in the period 2008 – 2014 covering 17 independent studies with a sample of 5,467 teachers and found no evidence to suggest that marital status affected organisational commitment. Ghaffaripour (2015) focused on a sample of 234 personnel in the oil refining industry in Iran and report also that employees' marital status was not a significant predictor of their organisational commitment. From this review, the present study, therefore, hypothesised that:

H₄ Marital status does not affect OC

H_{4a} Marital status does not affect AC

H_{4b} Marital status does not affect CC

H_{4c} Marital status does not affect NC

Working experience and organisational commitment

Working experience (tenure or length of service) is predicted in the literature to have a positive effect on OC, suggesting that a long working experience signals a high level of commitment. Meyer and Allen (1997) cited in Yahya and Ebrahim (2016) suggest that uncommitted employees tend to leave the organisation and that only the committed would remain. Iqbal *et al.* 2011 found that length of service was the best predictor of OC among faculty member of five universities in the Kingdom of Saudi Arabia. Meyer and Allen (1997) cited in Yahya and Ebrahim (2016) associate the positive effect with the notion that an employee's emotional attachment to an organisation grows with time. This notion suggests a positive relationship between AC and length of service. The time spent in an organisation can also be taken to be a proxy for personal investment in the organisation and as this investment grows, so are the difficulties an employee faces in arriving at the decision to leave. This also suggests that there would be a positive relationship between CC and length of service, consistent with Becker's (1960) side-bets theory. Studies reporting a positive effect of length of service on OC are many (e.g. Iqbal *et al.* 2011; Mathieu and Zajac, 1990; Mayer and Allen, 1997; Salami, 2008). However, other studies like Walumbwa *et al.* (2005) found that tenure was negatively related to OC of a sample of bank employees in both Kenya and USA. Moreover, Chughtai and Zafar (2006) and Balfour and Wechsler (1996) reported results suggesting that tenure is not a significant predictor of OC. Thus, the present study hypothesizes that:

H₅ Working experience does not affect OC

H_{5a} Working experience does not affect AC

H_{5b} Working experience does not affect CC

H_{5c} Working experience does not affect NC

Duty station and organisational commitment

CNLG is mandated to carry out its mission to prevent, fight against Genocide, and address its consequences both inside and outside the country through its attributions. It also operates a research centre in Kigali and Coordination offices – one in every two districts totalling 15 district centres from country's 30 districts. The research centre is responsible for the "Gacaca"

documentation. It is expected that employees working at the district centres would be much closer to the affected and needy people. Those who are assigned to the research centres are also expected to re-live the experiences through their work as researchers. It is hypothesized therefore that the level of employee commitment to the organisation would be different depending on one's duty station.

H_6 Duty station has no effect on OC

H_{6a} Duty station has no effect on AC

H_{6b} Duty station has no effect on CC

H_{6c} Duty station has no effect on NC

Conceptual framework

Figure 1. presents the study's conceptual framework as generated from the preceding literature review.

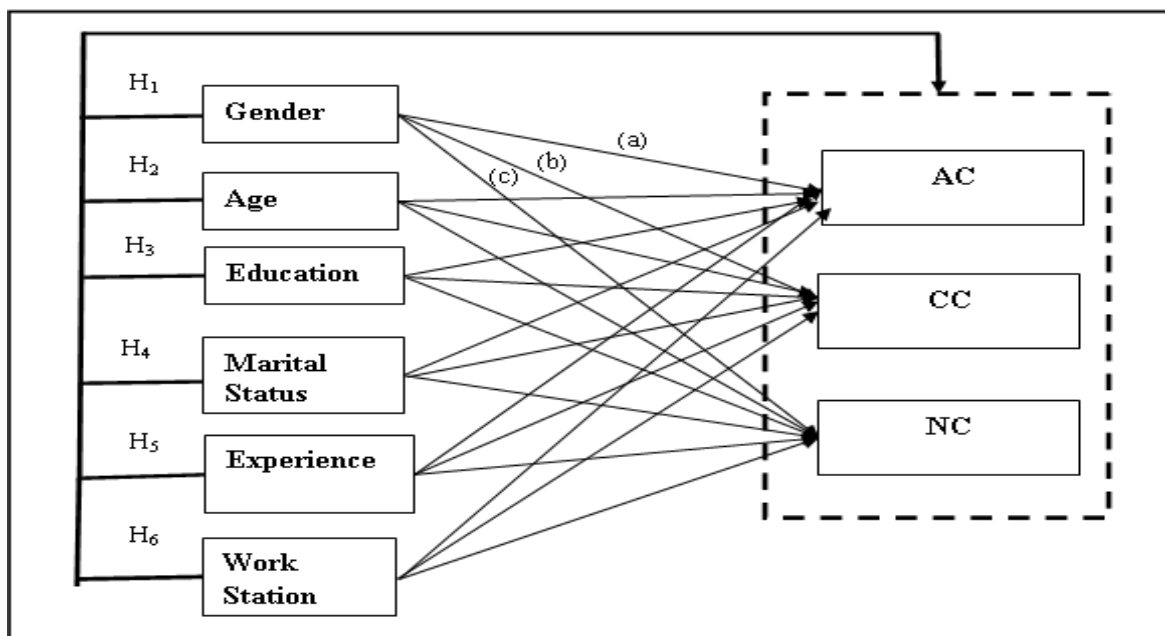


Figure 1: Conceptual framework

Methodology

Participants

Participants to this study were employees of CNLG. It has its headquarters and a research centre in Kigali and 15 district centres all over Rwanda, where each District centre coordinates two administrative districts. The organisation had a population of 135 employees across Rwanda (at the time of this study), where 68 were at the headquarters, 35 were at the research centre and the remaining 32 were at the district centres. Due to the small population and initial consideration of possible non-response related challenges, no attempt was made to sample. All employees were therefore targeted with a structured questionnaire. After several reminders and follow-ups, a total of 120 responses were received back. After screening them, only 119 were retained for further analysis including some of those which had some missing responses to some of the questions.

Instrument and Measurements

The study adopted a descriptive research design, cross-sectionally collecting primary data from the entire population using a structured questionnaire. The instrument had two main parts –

the OC section with 15 items split according to the three types of OC, and the demographic characteristics part with the six items – age, gender, education, marital status, working experience and duty station.

The 15-item scale used to measure OC was adapted from the short form of the Organisational Commitment Questionnaire (OCQ) originally developed by Mowday, *et al.* (1979). The respondents indicated the extent to which each item reflected their commitment to the organisation on a 7-point Likert-like scale ranging from 1 = strongly disagree to 7 = strongly agree, where a higher score indicated a higher commitment to the organisation. A scale test for reliability analysis was carried out on the data generated by this scale to assess their internal consistency. Both the OC and CC scales generated Cronbach's Alphas of .66 and .57 respectively each with a potential of rising to the Cronbach's alpha level of $>.7$ if one item was deleted from the CC scale items. Implementing this step, the new Cronbach's alpha and items included in brackets were OC (14) = .721; AC (5) = .780; CC (4) = .777; and NC (5) = .797 (Table 2). All alpha coefficients were above the recommended level of .7 (DeVellis, 2003, cited in Pallant, 2016), indicating a good internal consistency. These alphas were very similar to those reported in previous studies, e.g. Allen and Meyer (1990) who reported Cronbach's alphas of .8, .87, .75, .79 for OC, AC, CC and NC scales respectively. Individual participant's commitment scores reported were generated as the mean score of the responses across items in the OC or sub-scales of OC.

Participants gender was captured by respondents indicating on the questionnaire whether male or female. Three age groups were used to capture respondents' age, i.e. < 35 years, 36-45 years, and > 46 years. Level of education was captured by respondents indicating years of formal schooling by choosing either 18 or 20 years. In Rwanda, these translate to bachelor's and Master degree awards, respectively. Respondents were asked to indicate their status of marriage in four categories – single, married, divorced and widowed. The working experience was captured in three-time categories, i.e. ≤ 1 year, 2-5 years, and > 6 years. Finally, respondents were asked to indicate their duty station by choosing from headquarters, research centre or district centre. The distribution of participants in the categories of each variable was found to be skewed, with some categories having less than five observations. Thus, regrouping was done resulting in dichotomized variables. The attempt was also consistent with the requirements of the analytical models – correlation and regression analysis.

Analysis

Descriptive statistics (means, standard deviations) were computed for the overall and each subscale of OC across respondents and used to determine the level of OC among the employees of CNLG. To interpret the mean scores, into low, moderate and high levels of OC, the cut-off points recommended in Albdour and Altarawneh (2014, p. 200) were followed. The cut-off points were respectively < 2.0 ; 2.0 – 3.5; and > 3.5 , on a five-point rating scale, translating mechanically to < 2.8 ; 2.8 – 4.9; and > 4.9 respectively on a seven-point scale.

Pearson correlation analysis was used to test for the correlation among the variables – both the OC and demographic variables. This step was done for three reasons. First, it was to check for the correlation of the OC items following the findings of a meta-analysis study by Meyer *et al.* (2002) in which the three components of OC were found to be related, yet distinguishable from one another. Secondly, to check for the correlations among the independent variable. Finding high correlation coefficients between pairs of independent variables would indicate possible multicollinearity problems. Thirdly, it was done to check for linearity between independent

variables and the dependent variable(s). The last two were among the assumptions of the multiple linear regression analysis techniques. For the results of regression analysis to be meaningful, there should be some indication of bivariate correlations between independent variables and the dependent variable(s). Table 2 shows that the correlation coefficients among pairs of the independent variables are below the recommended level ($r > |.7|$) (Pallant, 2016), suggesting non-presence of multicollinearity problem. As a follow-up, collinearity diagnostics were requested for in the regression process and the variance inflation factors (VIF statistics) were below 1.5, which is far lower than the cut-off of 10, beyond which multicollinearity problems would have been suspected. For the independent variables to have some predictive power, it is recommended that many of the IVs have some correlations with the DVs. Results in Table 2 show that about 30 per cent of the coefficient of correlations between the independent variables and the dependent variables have $r > |.3|$, the highest having $r = |.425|$. Four standard multiple regression analysis (MRA) models were run to test the hypotheses of the study.

$$OC = \alpha + \beta_1 Gen + \beta_2 Age + \beta_3 Educ + \beta_4 MS + \beta_5 Exp + \beta_6 WS + \varepsilon \quad (1)$$

$$AC = \alpha + \beta_1 Gen + \beta_2 Age + \beta_3 Educ + \beta_4 MS + \beta_5 Exp + \beta_6 WS + \varepsilon \quad (2)$$

$$CC = \alpha + \beta_1 Gen + \beta_2 Age + \beta_3 Educ + \beta_4 MS + \beta_5 Exp + \beta_6 WS + \varepsilon \quad (3)$$

$$NC = \alpha + \beta_1 Gen + \beta_2 Age + \beta_3 Educ + \beta_4 MS + \beta_5 Exp + \beta_6 WS + \varepsilon \quad (4)$$

Where OC= Organisational commitment, AC = Affective commitment, NC = normative commitment, Gen = gender (1 = male, 0 = female); Age (1 = >35 years, 0 = ≤ 35 years), Educ = level of education (1 = 20 years, 0 = 18 years of formal schooling); MS = marital status (1 = married or divorced; 0 = single), Exp = working experience (1 = ≥ 2 years, 0 = < 2 years), WS = work station (1 = headquarters and research centres, 0 = district centres). β_1 to β_6 are the coefficients of interest in terms of testing the six hypotheses of the study. Each was used to determine whether a demographic variable has a significant effect on the OC, or its components, at the .05 level of statistical significance, holding the other demographic variables constant.

Results

Sample description

In the results (Table 1), about two-thirds of the respondents were male and 35 years old or younger. This represents the social-political situation in the country following the effects of genocide. The majority (about 82.6 per cent) had bachelors' qualification (18 years of formal schooling). About half of the participants were single, the rest being either married or divorced. Slightly above two-thirds of the participants had worked for CNLG for two or more years, and almost three-quarters of the employees were located in Kigali (headquarters and research centre). Again, these work experience results represent the nature of the workforce in Rwanda following the effects of genocide, where many organisations had to recruit fresh employees.

Table 1
Description of the sample.

Attribute	Frequency	Percentage
Gender [<i>N</i> = 119]		
Male	74	62.2
Female	45	37.8
Age [<i>N</i> = 118]		
≤ 35 years	79	66.9
> 35 years	39	33.1
Years of formal schooling [<i>N</i> = 115]		
18 years	95	82.6
20 years	20	17.4
Marital Status [<i>N</i> = 118]		
Single	58	49.2
Married or divorced	60	50.8
Experience [<i>N</i> = 116]		
< 2 years	35	30.2
≥ 2 years	81	69.8
Working Department [<i>N</i> = 119]		
Headquarters and Research Centres	87	73.1
District Centres	32	26.9

Organisational Commitment

All OC scales were rated on a seven-point scale and the mean scores and standard deviations were computed and presented (Table 2). The results indicate that all mean scores are above 4.9 with standard deviation varying from .47 to .95. Following Albdour and Altarawneh (2014), it can be concluded that OC was relatively high among the employees of CNLG with AC recording the highest commitment score. NC highly correlated with OC and CC but it is not as highly correlated with AC as suggested in Cohen (2014). CC is also highly correlated with OC.

Demographic characteristics as predictors of Organisational commitments

A standard multiple regression analysis was carried out to determine the effect of the six demographic variables on OC and its three components. In the results (Table 3), all four model fit statistics (F-statistics) were significant implying that the independent variables in the model had power in predicting OC as well as its three components. The six demographic characteristics jointly explain 52 per cent of the variations in overall OC, 13 per cent in AC, 30.3 per cent in CC and 64.1 per cent in NC, among the CLNG employees. Gender significantly negatively predicted OC, CC and NC implying that being a male employee is associated with lower overall OC, CC and NC relative to female employees. Age was significantly positively related to both OC and its three components, implying that OC increases with age.

Table 2.
Descriptive Statistics, Reliability Analysis and Correlation Results

Var.	Mean	S.D.	1	2	3	4	5	6	7	8	9
1. OC	5.72	0.47	0.721								
2. AC	6.07	0.55	.104	0.780							
3. CC	5.59	0.95	.775**	-.373**	0.777						
4. NC	5.47	0.78	.862**	-.172	.602**	0.797					
5. Gen			-.377**	.091	-.359**	-.360**					
6. Age			.395**	.148	.241**	.332**	-.005				
7. Educ			-.029	-.136	.087	-.032	.031	.009			
8. MS			-.263**	.108	-.109	-.425**	-.144	.294**	-.024		
9. Exp			.092	-.198*	.220*	.079	-.011	.182	.113	-.059	
10. WS			-.362**	.112	-.293**	-.414**	.417**	-.102	.086	.015	.288**

** p < 0.01; * p < 0.05

OC = Organisational Commitment; AF = Affective Commitment;

CC = Continuance Commitment; and NC = Normative Commitment, Gen = Gender; Educ = highest level of education; MS = marital status; Exp = employees' work experience, WS = employees' duty station

That is, being aged above 35 years, employees are more committed to the organisation than those who are aged 35 years or less. Marital status significantly negatively predicted OC and its dimensions except for the AC. This implies that being married or divorced, an employee recorded lower commitment than single counterparts. Work experience returned mixed results. Having worked for more than two years is significantly negatively associated with AC, significantly positively associated with CC but insignificantly positively associated with OC and NC. Working at the Headquarters, or at the research centre, relative to working at a district centre was significantly negatively associated with both CC and NC but significantly positively associated with AC. Using standardized coefficients, age was the most important determinant of OC ($\beta = .51$) while the most important determinant of AC was the working experience ($\beta = -.29$). For CC it was gender ($\beta = -.30$), and for NC it was marital status ($\beta = -.62$). The effect of the level of education across all OC variables was negative but insignificant.

Discussion

The present study found that the gender of employees significantly affected their OC negatively, implying that being a male is associated with significantly lower OC than being a female employee. Same results were recorded with both AC and NC but not with CC, which returned an insignificant positive coefficient. While the results are consistent with the results reported in Angle and Perry (1981), Aven *et al.* (1993), Marsden *et al.* (1993), and Mathieu and Zajac (1990), they are inconsistent with those reported in studies like Affum-Osei *et al.* (2015) and Dodd-McCue and Wright (1996) which reported higher commitment in male employees. Moreover, the results are also inconsistent with those of Abebe and Markos (2016), Al-Ajmi (2006), Aydin *et al.* (2011), Cho and Mo Barak (2008), Joiner and Bakalis (2006), Khalili and Asmawi (2012), Kónya *et al.* (2016) and Ling and Yuen (2014), which reported statistically insignificant relationship or gender differences.

Table 3.
Demographic Characteristics as Predictors of OC and its dimensions

Variable	OC	AC	CC	NC
Constant	6.07**	6.105**	5.871**	6.22**
Gender	-.367**	.001	-.588**	-.573**
Age	.511**	.257*	.483**	.803**
Education	-.026	-.181	.208	-.046
Marital Status	-.436**	.022	-.388*	-.955**
Experience	.011	-.347**	.437*	.018
Duty Station	-.136	.252*	-.396**	-.320**
R ²	52.3	13.4	30.3	64.1
F-Statistics	19.18**	2.72*	7.59**	31.3**

** p < 0.01; *p < 0.05

OC = Organisational Commitment; AF = Affective Commitment; CC = Continuance Commitment; and NC = Normative Commitment; VIF < 1.5

In conclusion therefore, only hypothesis H_{1b} was accepted implying that gender had insignificant effect on AC (H_{1a}) but a significant negative effect on OC (H₁) as well as on the CC (H_{1b}) and NC (H_{1c}) in which female employees are more committed to the organisation than their male counterparts. Thus, H₁ and H_{1b} and c were rejected in favour of the alternative hypotheses. These results are consistent with the general view presented in the meta-analytic studies of Aven *et al.* (1993) and Marsden *et al.* (1993) and lends support to their conclusion that female employees may be facing a significant number of challenges in getting jobs and also when they are on the job, which in turn make them more committed to the present job than their male counterparts.

The present study found age to be significantly positively related to both OC and its three components. Hypotheses H₂ and H_{2 a-c} were rejected. These results were consistent with many previous studies (e.g. Affum-Osei *et al.* 2015; Al-Khatami, 2012; Allen and Meyer 1990; Amangala, 2013; Angle and Perry, 1981; Azeem, 2010; Dodd-MacCue and Wright, 1996; Pourghaz *et al.* 2012; Salami, 2008). Moreover, the results may lend support to the idea of Kitchen (1989) cited in Al-Kahtan (2012) that older employees face scarcity of alternative employment due to the reluctance of many organisations to hire them fearing that the length of their contribution to the organisation would necessarily be brief. They also lend support to the side-bet theory of Becker (1960) which suggest that employees consider the value of their investment in an organisation, which would be lost if they quit and that this value grows with age. The older the employee, therefore, the more committed he or she becomes to the organisation in fear of losing these side bets.

The present study also found an insignificant relationship between education and OC. Hypotheses H₃ and H_{3a-c} were accepted. The results are inconsistent with the previous studies which reported positive relationships like Iqbal *et al.* (2011) in Saudia Arabia and those that report negative relationship like Nifadkar and Dongre (2014) in India. Furthermore, the present study found that marital status significantly negatively affects OC. Being married or divorced, relative to being single was significantly negatively associated with OC, CC and NC. Thus, H₄ was rejected together with sub-hypotheses b and c. Only H_{4a} was supported. The results are

consistent with those reported in the previous studies like Affumu-Oseit *et al.* (2015); Angle and Perry (1981); Chughtai and Zafar (2006); Mathieu and Zajac (1990); Salami (2008); but contradicts those reported in Cogaltay (2015); Ghaffaripour (2015); and Joiner and Bakalis (1996). Thus, the results of the present study lend support to the notion that married or divorced employees carry with them the family and financial burden, and that rather than being more committed to the present organisation because they need job security, job and financial stability to help them cope with these responsibilities, they may instead be busy looking for greener pastures with more pay and other benefits. This conclusion is reinforced by the results that marital status is not a significant predictor of affective commitment (emotional attachments) but a significant negative predictor of continuance (cost-benefit) and of normative commitment (obligatory).

Unlike the prediction in the OC literature that working experience (tenure or length of service) has a positive effect on OC, this study finds a significant relationship between work experience and AC contrary to the notion by Meyer and Allen (1997) that emotional attachment to an organisation grows with time. However, the study also finds a significant positive relationship between work experience and CC. Thus, H₅ and H_{5c} were accepted but not H_{5a} and b. In addition to these results being consistent with previous studies (Iqbal *et al.* 2011; Mathieu and Zajac, 1990; Meyer and Allen, 1997 cited in Yahya and Ebrahim, 2016; Salami, 2008), the significant positive relationship with CC is consistent with the notion that the time spent in an organisation is a proxy for the personal investment in the organisation and as it grows, so are the difficulties employees face in arriving at a decision to leave. These results, therefore, lend support to Becker's (1960) side-bets theory.

The present study found that being stationed at the headquarter or the research centre relative to being stationed at district centres, is significantly negatively associated with CC and NC, significantly positively associated with AC (H_{6b-c} rejected) but insignificantly associated with OC (H₆ accepted). CNLG deals with the aftermath of genocide in Rwanda. It is possible that employees who work at the district centres are closer to the victims. This is presumed to have developed in them the sense of "must help them, otherwise who else would", leading to higher commitment than that of their counterparts at the Headquarters or at the research centre, both of which are located in the city of Kigali.

Conclusions and recommendations

The study concludes that employees at CLNG are highly committed to the organisation but show more affective commitment than the rest of the commitment dimensions. It also concludes that of the six demographic characteristics examined – gender, age, and marital status significantly predicted OC. While age consistently positively predicted all three dimensions of OC significantly, the results are mixed for gender, experience, marital status and duty station depending on the dimension being analyzed. Education produces insignificant results consistently across the OC dimensions. The positive and significant relationship for age and working experience (tenure) with continuance commitment lends support to the side-bet theory. It is recommended therefore that organisational managers should consider differences in the demographic characteristics in the plans to enhance employees' commitment to the organisation.

However, it is important to recognize that the findings of these study are limited in generalizability as they are based on one organisation with a unique mission. A possible extension is to test for the other demographic characteristics, other organisational concepts

such as job satisfaction, job involvement, employee motivation, emotional intelligence, to mention but a few. All these have been shown elsewhere to be antecedents of OC. On the other hand, testing for the outcomes of OC such as employee performance, turnover intention, organisational citizen behaviour, employee counterproductive behaviour is warranted in the frontier markets where they have been sketchily researched. As growing economies, a better understanding of levels of OC its antecedents and consequences would be very useful in enhancing OC in organisations. Longitudinal studies are not to be left out because it has been shown elsewhere that OC does evolve over time. Use of a sample size that also considers multi-industry mix is also recommended.

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