

Are affective and calculated commitments relevant for African civil servants?

Peut-on parler d'engagement affectif et d'engagement calculé chez les agents publics africains ?

Fanou Arsène VIGAN

Institute of Political, Historical and International Studies (IEPHI)
University of Lausanne, 1015 Lausanne, Switzerland
FanouArsene.Vigan@unil.ch

ABSTRACT

The purpose of this study is to analyze the relevance and dimensionality of Meyer and Allen's affective and calculated commitments in an African context. The results of the exploratory and confirmatory factor analyses on two samples of Beninese civil servants show that both affective and calculated commitments are relevant concepts. However, in contrast to previous studies, affective commitment

includes two distinguishable sub-dimensions: social attachment and organizational values. The two sub-dimensions generally found in the literature for calculated commitment are confirmed. The implications of these findings are discussed.

Key-words

affective commitment, calculated commitment, culture, public administration, Africa

RÉSUMÉ

Cette recherche vise à analyser la pertinence et la dimensionnalité des engagements affectif et calculé au sens de Meyer et Allen dans un contexte africain. Les résultats de l'analyse factorielle exploratoire et de l'analyse factorielle confirmatoire sur deux échantillons d'agents publics béninois montrent que l'engagement affectif et l'engagement calculé sont des concepts pertinents dans ce contexte. Cependant, contrairement aux études antérieures, l'engagement affectif s'est révélé comme un concept composé de

deux sous-dimensions distinctes : l'attachement social et l'attachement aux valeurs organisationnelles. Les deux sous-dimensions généralement trouvées dans la littérature pour l'engagement calculé ont été confirmées. Les implications de ces résultats sont discutées.

Mots-clés

engagement affectif, engagement calculé, culture, administration publique, Afrique

INTRODUCTION

Since Meyer and Allen's research in the early 1990s (Allen and Meyer, 1990; Meyer and Allen, 1991), it is increasingly accepted that organizational commitment is formed by the affective, calculated, and normative dimensions. This three-component model of commitment has been well received by the scientific community, due to its explicit theoretical foundation, its inclusive and consensual nature, but also and above all to abundant empirical validation. Thousands of studies have contributed to popularizing this conception of the relationship between employees and their organization, making it a reference model (see Allen and Meyer, 1996; Meyer *et al.*, 2002, 2012; Fisher and Mansell, 2009; Bentein *et al.*, 2000, 2004).

However, some uncertainties still remain with respect to the applicability of the model outside the North American context in which it was conceived. Meyer and his colleagues (2012) acknowledge this and recommend that more studies, particularly in non-Western countries, in order to better understand the phenomenon. In a meta-analysis, the authors found that less than 1% of studies on organizational commitment were published in Africa (Meyer *et al.*, 2012), confirming the findings of Gbadamosi (2003), who observes that research on this subject is scarce on the African continent. The result of this indisputable paucity of research is that many questions remain unanswered as to the nature of the bond that African civil servants develop with the organizations for which they work.

At present, research on organizational commitment in Africa converges towards the results of Levesque *et al.* (2004), which show that African civil servants act essentially from a sense of duty, which is comparable to a normative commitment. According to Meyer and Allen (1991, 1997), this type of commitment depends on numerous factors, notably on family, cultural, societal or organizational pressures on the individual, or which the latter feels before joining the organization and during his or her process of socialization within the organization. These types of pressure would seem to be very common in Africa (Bourgoin, 1984; Hofstede *et al.*, 2010; Levesque *et al.*, 2004; Meyer *et al.*, 2012).

Although results are more or less convergent as far as normative commitment is concerned, the affective and

calculated commitment of civil servants in Africa remains a mystery. Therefore, the purpose of this study is to analyze the relevance and dimensionality of these two types of commitment in a public African administration. In other words, are the concepts of affective and calculated commitment as defined by Meyer and Allen relevant in the African context? If so, what are their psychometric properties?

Such a study is all the more justified as the dimensionality of the organizational commitment is criticized "outside North America" (Meyer *et al.*, 2002). Moreover, several studies have shown that the management tools and research models developed in the Western context are inappropriate for the African environment (Bourgoin, 1984; Hofstede *et al.*, 2010; Mutabazi, 2008; Kamdem, 2010). As the concepts of affective and calculated commitments "are originally North American", it is necessary to clarify whether they correspond to the African reality.

Based on two field surveys conducted on the public administration of Benin, this study contributes to a better understanding of organizational commitment outside the North American context. This article centers on four points. The first is devoted to a review of the literature and to the hypotheses of the study. The second explains the methodology used. The third point presents and discusses the results of the study. And finally, this article ends by presenting the theoretical and managerial implications that derive from the study.

1. LITERATURE REVIEW

and hypotheses

In this section, the foundations of the three-dimensional model of organizational commitment, the effects of cultural differences on organizational commitment, and the hypotheses of the study are presented.

1.1. *The foundations of the three-dimensional model of organizational commitment*

Meyer and Allen's three-dimensional model (Allen and Meyer, 1990; Meyer and Allen, 1991) is the most widely used today in international research on organizational commitment. Although its generalization "outside North America" is not yet proven (Meyer *et al.* 2002; Steijn and Leisink, 2006) due to the lack of research in those contexts, this model has won over many social and human sciences researchers thanks to its solid foundations (Allen and Meyer, 1990, 1996; Meyer and Allen, 1991, 1997).

The model was developed in the 90s but its origins go back to the 60s. Indeed, the notion of commitment was already being used in sociological research without having been given a real and unique content. This is what led Becker (1960) to try to conceptualize the notion and apply it to organizations. Therefore, the first definition of organizational commitment found by Reichers (1985) is that of Becker (1960). The latter describes commitment as a sort of bet. In his "side-bet theory", Becker considers that commitment to an organization is linked to the costs and benefits that the individual associates with staying in that organization. Thus, organizational commitment depends on what an individual might gain by staying in an organization or by what they might lose by leaving it. This is what was later to be called calculated commitment.

This essentially materialist conception of commitment to an organization was challenged by another, so called "attitudinal", conception which underscores the attachment and loyalty of an individual to an organization. It appeared towards the end of the 70s in the works of Mowday *et al.* (1979). The latter considered that organizational commitment conveys acceptance of and belief in the goals and values of an organization, the will to work towards accomplishing

them, and the desire to remain a member of that organization. In short, these authors focused mainly on the affective aspect of the relationship between individuals and their organization.

It was at that point that a possible multidimensionality of the concept began to interest researchers such as Reichers (1985); Mathieu and Zajac (1990) and Allen and Meyer (1990). Following a meta-analysis, Mathieu and Zajac (1990) concluded that the two conceptions (calculated and affective) of organizational commitment pre-existing in the literature seemed to be two dimensions of organizational commitment. Reichers (1985), for his part, developed a multi-faceted approach, deeming that employees have different types of commitment to the different actors of an organization and that they could develop different commitments towards, for example, the trade unions, management, clients/users, the community and colleagues. But it is Allen and Meyer's (Allen and Meyer, 1990; Meyer and Allen, 1991) three-dimensional conception of organizational commitment that appears to have been most convincing in research circles and has established itself over time.

Meyer and Allen show that organizational commitment is composed of three dimensions. In addition to the two dimensions (affective and calculated) that seemed to prevail in the literature at the time, they propose a normative dimension. The latter first appeared as a component of organizational commitment due to Meyer and Allen (Liou and Nyan, 1994; Paillé, 2005), although, as of 1982, Wiener already proposed a normative vision of organizational commitment (Wiener, 1982). Normative commitment refers to a moral obligation of employees to stay with their organization. It is also the sense of obligation or duty that an employee feels towards the organization, and which leads him or her to stay. Employees with a high level of normative commitment stay with the organization because they feel an obligation to stay (Meyer and Allen, 1991, p.67). Affective commitment, for its part, refers to the feeling of emotional attachment of a civil servant towards the organization. Meyer and Allen (1991, p.67) explain that employees with a high level of affective commitment stay with the organization because they want to. Finally, continuous or calculated commitment derives from the individual's perception of the costs and sacrifices linked to a possible departure from the organization. Employees

with a high level of calculated commitment stay with the organization because they need to (Meyer and Allen, 1991, p.67). While in North America and in Western countries in general the psychometric properties of the three-dimensional model are proven, outside this context the model does not seem to have the same psychometric properties and appears to be sensitive to cultural differences (Meyer *et al.*, 2012; Meyer *et al.*, 2002; Cheng and Stockdale, 2003; Tayyeb and Riaz, 2004).

1.2. Cultural specificities of organizational commitment

The cultural differences between countries are not without consequences on the three-dimensional model of organizational commitment. According to Meyer *et al.* (2012), collectivist countries show a stronger normative commitment (NC) than individualist countries. Numerous studies have described the collectivist nature of African culture, which distinguishes it from Western, and notably North American, culture. In his “African circulatory management model”, Mutabazi (2008) refers to this extensively in speaking of the characteristic “relationality” of the African. He explains that the practices, norms, behaviors, and “life principles” that Africans share mean that “individuals are generally bound together within the clans by family ties, but also between communities by family ties and networks of relations” (p.25). Hofstede *et al.* (2010) and Bourgoin (1984) also talk about the “collectivist” nature of African culture, which implies that the African lives and thrives within a community. According to Hofstede *et al.* (2010), this type of society presupposes that each individual is integrated in a strong and cohesive group which protects them and to which they owe loyalty. The consequences of this strong collectivism can manifest themselves in the workplace as loyalty and a sense of duty, explaining the strong normative commitment associated with collectivist cultures compared to individualist cultures (Meyer *et al.* 2012).

Affective commitment could also be influenced by the national culture. In their works, Meyer *et al.* (2012) analyze the relationship between affective

commitment and the cultural dimensions of Hofstede (2001)¹ and Schwartz (2006)². The results indicate that affective commitment is negatively correlated with the dimensions of individualism (in particular affective and intellectual autonomy) of Schwartz and Hofstede. Likewise, the affective component of organizational commitment is positively correlated with Schwartz’s embeddedness orientation. In short, the empirical results suggest that, in collectivist countries, affective commitment is stronger than in individualist countries.

The relationship between calculated commitment and culture appears contradictory. According to Meyer *et al.* (2012), the calculated component of organization is not related to cultural practices and values. However, in their meta-analysis, Fischer and Mansell (2009) find that the three dimensions of organizational commitment are influenced by national culture. They point out that high power distance is related to high calculated commitment. These results suggest that in countries with high power distance, calculated commitment is strong. Thus, Fischer and Mansell have established a link between calculated commitment and culture, unlike Meyer *et al.* (2012). In short, these results make it possible to conclude that organizational commitment varies from one culture to another.

In addition to these cultural differences, the factor structure of organizational commitment seems unstable from one cultural context to another. Indeed, some studies in non-Western contexts point out the difficulty in reproducing the same factor structures as North American studies. Meyer *et al.* (2002) showed that, affective and calculated dimensions of commitment have stronger correlation in the studies conducted outside North America than those conducted in the North American settings. Likewise, Cheng and Stockdale (2003) found that the three-dimensional organizational commitment model is poorly represented in China. Whereas Tayyeb and Riaz (2004) indicated that this model is only partially verified in Pakistan. Lee *et al.* (2001) have also had difficulties in reproducing the three-dimensional factorial structure in a study conducted in South Korea. In all of these cases, the Meyer and Allen model did not fit the empirical data well.

¹ In Meyer *et al.* (2012).

² *Idem.*

The problems related to the psychometric properties of this model outside North America are generally attributed to cultural differences and to difficulties in translating measurement into other languages (Meyer *et al.*, 2012; Tayyeb and Riaz, 2004). These authors also report that the cultural differences in terms of organizational commitment show that a generalization of the three-dimensional model requires more research efforts. Our contribution is part of this dynamic, in order to further a better understanding of this notion in a context in which it has received little attention to date. It will help to determine to what extent the concepts of affective and calculated commitment are adaptable to a public administration context in Africa.

1.3. Hypotheses

Affective commitment is the most widely studied dimension of organizational commitment (Vandenberghe, 2005; Simard, 2000; Mathieu and Zajac, 1990).

It has shown high homogeneity between items and therefore relatively high internal consistency levels in empirical research irrespective of the cultural context (see Allen and Meyer, 1996). Most of the results of research conducted in non-Western countries equally confirm the unidimensionality of affective commitment (AC) and its relevance (Lee *et al.*, 2001; Cheng and Stockdale, 2003; Tayyeb and Riaz, 2004). These studies confirm this unidimensional structure found in western research (Meyer *et al.*, 1990; Allen and Meyer 1996). In concordance with these results, the first and the second hypotheses are formulated as follows:

- **H1:** Affective commitment is relevant for Beninese civil servants
- **H2:** Affective commitment is a unidimensional concept in the context of Benin's public administration

With regard to calculated commitment, Agonhossou and Godonou (2011, p.114) have shown that this concept is relevant for state-employed licensed nursing staff in Benin. Therefore, the third hypothesis is developed as:

- **H3:** Calculated commitment is relevant for Beninese civil servants

Moreover, it is increasingly emphasized that calculated commitment is a bidimensional concept. McGee and Ford (1987) have pointed out that calculated commitment could be composed of two distinct sub-dimensions, which are: commitment resulting from a perceived lack of employment alternatives outside the organization ("low alternatives"), and commitment resulting from the awareness of "high personal sacrifice associated with leaving the organization" ("high sacrifice"). These results are confirmed by certain studies which emphasize that, although strongly correlated, the two sub-dimensions could be related in different ways to behavior in the workplace (Bentein *et al.*, 2004; Bentein, *et al.*, 2000; Meyer *et al.*, 1990; Allen and Meyer, 1996; Meyer *et al.*, 2002). In a study conducted on a sample of state-employed licensed nursing staff in Benin, Agonhossou and Godonou (2011) also subdivide calculated commitment into two sub-dimensions. Their findings suggest that it would be interesting to distinguish the two sub-dimensions of calculated commitment in this context. Thus, it is hypothesized that:

- **H4:** In Benin's public administration, calculated commitment is a two-dimensional concept composed of two sub-dimensions: "high sacrifice" and "low alternatives".

In order to verify these hypotheses, an exploratory factor analysis and a confirmatory factor analysis on two samples of Beninese civil servants have been conducted. The following section explains the methodology used.

2. RESEARCH METHODOLOGY

The purpose of this study is to test the relevance and dimensionality of affective commitment and calculated commitment as defined by Meyer and Allen in the context of Benin's public administration. Exploratory and confirmatory studies were conducted to that effect.

2.1. The first study: exploratory phase

The first study took place in a decentralized structure of the Ministry of Agriculture, Livestock and Fisheries of Benin. This structure mainly provides technical support to local farmers and advises farmers' organizations on good agricultural practice. At the time of the study, it had 412 employees. This study included approximately 25% of the total workforce of the structure using the quota method. In all, 105 hard copy questionnaires were distributed directly to the employees at their workplace.

After the collection operations (reminders to the employees, visit to the offices), 93 valid questionnaires were gathered, i.e. a response rate of 88.57%. This sample is representative of the different socio-professional categories of the structure (approximately 25% permanent state employees, 75% contract employees, 25% women, 75% men). The contract employees represent the younger ranks of this public service. All employees under the age of 30 are contract employees (47% of the respondents) and only permanent employees are over 50 (10% of respondents). The remainder of the respondents (43%) is aged between 31 and 50. Also in this age group, the youngest are contract employees. Senior managerial staff represents 16% of respondents, mid-level executives 56%, junior managers 28%.

The data collected during this phase were processed using SPSS 18. An analysis of the factor structure of the scales of affective commitment and calculated commitment of Meyer *et al.* (1993) was conducted. In doing so, I carried out principal components analyses (PCA) with varimax rotation. The Kaiser criterion³ was chosen to determine the number of factors. The internal consistency of the scales was measured using Cronbach's alpha.

2.2. The second study: confirmatory phase

For this phase, "it is advisable to collect a new sample" (Roussel, 2005, p.260). The data used here are therefore those of a study conducted exactly one year after the first, on a sample of 500 managers working in three ministries in Benin. In total, 357 valid questionnaires were gathered, i.e. a response rate of 71%. This sample was made up of 32% of contract employees and 68% of permanent employees. Senior managerial staff⁴ represented 43%, 32% were mid-level executives⁵ and 25% were junior managers⁶. Of the respondents, 62.50% were men; 19% were under 30 years of age, whereas 22% said that they were over 50. Employees between the ages of 31 and 50 made up the majority of the sample and represented almost 60% of respondents.

A confirmatory factorial analysis was done on the collected data to verify the factor structure obtained during the exploratory phase. The goodness of fit was thus estimated using structural equation models with AMOS 22. The parameters were estimated by the maximum likelihood method. This method gives much better results, "even when the hypothesis of multivariate normality is violated and one is dealing with large samples" (Roussel *et al.*, 2005, p.304), as in the case of this study.

The following table shows the synthesis of the indicators used to measure the quality of the fit. For each dimension of the commitment studied, I have compared the fit of the unidimensional model of Meyer *et al.* (1993) to the model arising from the exploratory analysis..

³ Retain factors with an eigenvalue greater than 1.

⁴ Employees in managerial, supervisory, and/or creative positions (category A according to law N°86-013 du 26 February 1986 on the general status of permanent state employees in Benin).

⁵ Employees in high level policy-making and executive positions (category B according to the abovementioned law).

⁶ Employees in posts corresponding to specialized implementation tasks (category C according to the same law).

Indices	Key values
χ^2	Low value
χ^2/ddl	Close or <5
AGFI and GFI	Close or >0,9
RMSEA	$\leq 0,08$
NFI	Close or > 0,9
CFI	

Note

χ^2 = Chi-square,
ddl = degree of freedom,
GFI = Goodness of Fit Index,
AGFI = Adjusted Goodness of Fit Index,
RMSEA = Root Mean Square Error of Approximation,
NFI = Normed Fit Index,
CFI = Comparative Fit Index.

Table 1 – Synthesis of the indicators used to test the goodness of fit

Source : Adapted from Benraiss (2004) and Roussel et al. (2005)

2.3. Measurement of affective commitment and calculated commitment

Affective commitment and calculated commitment were measured using the scale of organizational commitment developed by Meyer *et al.* (1993). Each dimension contains six items. The scale was translated into French from the English by Durrieu and Roussel (2002) and used by the latter on a French sample. They report internal consistency indicators measured by Jöreskog's rho of 0.61 for the affective dimension and of 0.74 for the calculated dimension. Agonhossou and Godonou (2011) used the calculated dimension of this French translation in their study on nursing staff involvement in Benin and reported reliability indices of Cronbach alpha 0.95 and 0.98 respectively for the contract employees and permanent employees in their sample.

The instrument has been slightly adapted to the context of the study by replacing “franchise network” or “network” by “service”. The respondents were asked to respond on the basis of the five-point Likert scale, from (1) “strongly disagree” to (5) “strongly agree”(see appendix).

3. RESULTS AND DISCUSSIONS

First, the factor structure of the two scales will be presented in order to determine their dimensionality. Next, I will present the results of the confirmatory analyses and, finally, the results of the correlation analysis.

3.1. Factor structure of affective commitment and calculated commitment

A concept is considered to be unidimensional if all the items that measure it form a single factor after factor analysis, whereas if several factors emerge it is deduced that it is multidimensional.

3.1.1. Affective commitment

In order to test the dimensionality of affective commitment, a principal components analysis (PCA) was performed using varimax rotation. The rotation converged in 3 iterations. The Kaiser, Meyer and Olkin (KMO) test, with a value of 0.775, and Bartlett's sphericity test (Bartlett = 181.375; $p = 0.000$) indicate that the data are factorable. Two clear factors emerged from this PCA, as shown in Table 2. The two factors reproduce 70.02% of the explained variance.

The first factor that emerged reproduces 39.68 % of the total variance. It will be called “Affective commitment based on social attachment” (ACSOC). It is composed of three items, such as: “I do not consider myself a member of the family in this service”. This factor conveys the emotional attachment of the individual to the group formed by the members of his or her service or organization. It is an affective commitment arising from the attachment of an employee towards the other employees in the service.

This dimension illustrates the interest of the respondents in the social dimension of the organization,

Items codes*	Components	
	1	2
emotional attachment	,890	
sense of belonging	,866	
member of the family	,836	
personal meaning		,765
rest of career		,760
service problems	,341	,758

Table 2 – Component matrix for affective commitment

*The full wording of the items is in the appendix.

i.e. the atmosphere in the group, friendliness and cheerfulness in the workplace. Henry (2008 p. 40) considers that in Africa “good personal relations between employees are an essential condition for professional cooperation”. Such very personal relationships among employees go beyond simple professional relationships and develop mainly during frequent courtesy visits to the families of co-workers, but also through participation and support on the occasion of ceremonies commemorating special events in the co-workers’ lives, such as the births, baptisms, weddings, funerals of relatives (Mutabazi, 2008; Bourgoin, 1984). Participation in community solidarity networks such as staff associations and tontines could also foster the development of such group attachment (Nkakleu, 2009). Employees with a strong affective commitment through social attachment stay with an organization because they feel a strong bond with its members.

The second factor reproduces 30.53 % of the total variance. This factor appears just as decisive for the affective commitment of Beninese civil servants. It will be called it “Affective commitment based on attachment to organizational values”(ACVAL). This sub-dimension of affective commitment which emerges is also composed of three items, including: “*This service has a great deal of personal meaning for me*”. It describes the willingness of employees to remain members of the organization because they identify with the values and goals of the organization and because they are willing to involve in it. Attachment

to public service could be decisive in the development of this type of commitment among employees. Employees with strong affective commitment based on attachment to organizational values remain with the organization because they identify with the values and mission of the organization and want to be involved in it.

In summary, it appears that affective commitment in the context of Benin’s public administration is a two-dimensional concept. The two sub-dimensions that emerged are “affective commitment based on social attachment” (ACSOC) and “affective commitment based on attachment to organizational values” (ACAOV). Clearly, we can conclude at this stage that, civil servants do not become emotionally attached to a public administration only because they want to, but because they become attached to its values and its members.

3.1.2. Calculated commitment

In the same way, a PCA with varimax rotation was done to analyze the factor structure of the calculated commitment in Benin’s public administration.

The rotation converged in 3 iterations. The KMO test, with a value of 0.681, is acceptable. Similarly, the Bartlett sphericity test (Bartlett = 230.782; p = 0.000) is also significant in showing that the data are factorable. Here also, two sub-dimensions clearly

Items codes*	Components	
	1	2
life disrupted	,897	
Necessity	,855	
wish to leave	,826	
options for leaving	,523	,486
lack of alternatives		,912
gift of self		,897

Table 3 – Component matrix for calculated commitment

*The full wording of the items is in the appendix.

emerged. These two factors explain 74.25% of the variance. The first sub-dimension is composed of 4 items (for example: “Right now, staying with my organization is a matter of necessity as much as desire.”). It reproduces 42.15% of the total variance and is similar to what is generally referred to in the literature (Bentein *et al.*, 2004; Bentein, *et al.*, 2000; Meyer *et al.*, 1990) as calculated commitment based on a lack of perceived employment alternatives. This type of commitment develops when the employees perceive that they benefit from employment conditions that they would not find in other organizations.

In Benin, civil service is generally perceived as a secure job, with conditions that many private companies do not have. It offers enormous advantages (pension for life upon retirement, opportunities for promotion and professional advancement, job security and stability, regular salary not performance-related⁷) that are hard to come by on the private market. Employees with a strong commitment based on a perceived lack of employment alternatives remain members of the organization because they have no other job possibilities outside it.

The second sub-dimension is similar to what is called “high sacrifice” in the literature (Bentein *et al.*, 2004; Bentein, *et al.*, 2000; McGee and Ford, 1987; Meyer *et al.*, 1990). It is composed of two items (for example: “If I had not already put so much of myself into

the service I might consider working elsewhere”. It explains 32.12% of the total variance. This type of commitment conveys the fact that employees feel that all the sacrifices they have made for the public administration would be lost if they were to leave it. They also feel that they would have to make enormous sacrifices to find another job outside the public administration.

Employees with a strong calculated commitment based on “high sacrifice” are constrained to stay in the public administration for two major reasons. The first is that they feel they have sacrificed a great deal for the public administration and/or in order to make a place for themselves within it (preparing recruitment competitions, competition-related stress, procedures for tenure, working in an underprivileged or rural environment, etc.) and that they would lose the fruit of their labor if they were to leave it. The second reason is that they feel that they will need to sacrifice yet more (further training, loss of the still greatly prized status of civil servant, time unemployed, salary interruption, uncertainty about the future due to the search for another job, etc.) in order to find another job if they decide to leave the public administration.

In short, for the two dimensions of organizational commitment studied, two sub-dimensions have emerged. The internal consistency indices

⁷ Which means that employees receive their salary whether they do a good job or not.

Dimensions of commitment	Sub-dimensions	Number of items	Cronbach's alpha
Affective commitment (AC)	AC based on social attachment (ACSOC)	3	0,844
	AC based on attachment to organizational values (ACVAL)	3	0,682
Calculated commitment (CC)	CC based on "perceived lack of alternatives" (CCALT)	4	0,817
	CC based on "perceived sacrifice" (CCSAC)	2	0,833

Table 4 – Internal consistency of the sub-dimensions that emerged after the PCA

(Cronbach's alpha) calculated for these sub-dimensions are satisfactory, as shown in Table 4. The next stage is therefore the confirmatory analysis.

3.2. Confirmatory analysis

The goal of this confirmatory factor analysis is to test the validity of the factorial structure which emerged during the exploratory analysis and to compare the fit of the two-dimensional model to the unidimensional model. A multitude of indices were estimated for each dimension of the organizational commitment studied. Table 5 shows the synthesis of the results of the estimations of the two-dimensional model for affective commitment (AC).

This table indicates that the AC model with two sub-dimensions (ACVAL and ACSOC) is correctly adjusted and adjusts better than the unidimensional model. In the model with two-sub-dimensions, the value of χ^2 is weak and the value of $\chi^2/\text{degree of freedom}$ (0.946) is substantially inferior to 5, which is the critical threshold. This value is substantially lower than that of the unidimensional model (11.535), which has a poor fit. In order for the RMSEA to be accepted its value must be lower than 0.08. The model of AC with two sub-dimensions gives a value of 0.000, indicating excellent fit, unlike the unidimensional AC model (RMSEA = 0.172). The GFI, AGFI, NFI and CFI are also satisfactory for the AC model with two sub-dimensions as they are well above 0.9, whereas these indices are unsatisfactory for the unidimensional AC model.

Indices	Null model	Unidimensional AC model	Two-dimensional AC model
χ^2	487,472	103,812	7,572
ddl (p)	15 (0,000)	9 (0,000)	8 (0,476)
χ^2/ddl	-	11,535	0,946
GFI	-	0,902	0,993
AGFI	-	0,770	0,982
RMSEA	-	0,172	0,000
NFI	-	0,787	0,984
CFI	-	0,799	1,000

Table 5 – Synthesis of fit indices for the affective commitment model

In short, all the fit indices for the two-dimensional AC model are better than the indices for the unidimensional model, testifying to the superiority of the two-dimensional model over the unidimensional model. Therefore, it appears that in the Beninese context affective commitment is composed of two distinct sub-dimensions: “affective commitment based on social attachment” (ACSOC), and “affective commitment based on attachment to organizational values”(ACVAL). Moreover, these results show that affective commitment is relevant for Beninese civil servants. Thus, hypothesis H1: “affective commitment is relevant for Beninese civil servants” is validated, and hypothesis H2: “affective commitment is a unidimensional concept in the context of the Beninese public administration” is not supported.

Concerning calculated commitment (CC), the following table shows the synthesis of fit indices. The results indicate that the two-dimensional model of CC also presents better fit indices than the unidimensional model of CC. Therefore, these results show the superiority of the two-dimensional model of calculated commitment over the unidimensional model.

However, it should be noted that the Chi-square/degree of freedom in the two-dimensional model of CC has a value of (5.135) slightly over 5. Likewise, the RMSEA index is equal to 0.108 whereas it should be less than 0.08, the acceptable threshold for this study.

Benraiss (2004, p. 174) points out that “any model presenting an RMSEA over 0.10 must be rejected”. In the case at hand, this value is equal to 0.108 (over 0.10). Thus, although the GFI and AGFI are satisfactory, as well as the NFI and CFI, I modified the model resulting from the PCA by eliminating the item with correlation over 0.3 in both sub-dimensions.

After elimination of the item, the two-dimensional model obtained is much better adjusted than the preceding ones. The Chi-square/degree of freedom (2.975) is now less than 5 and the RMSEA (0.074) is less than 0.08. These indices show that the modified model has better fit. Moreover, the other fit indices (χ^2 , $df(p)$, GFI, AGFI, NFI, and CFI), which were already satisfactory in the initial two-dimensional CC model, have improved ($\chi^2=11.900$; $df(p)=4(0.018)$; GFI=0.987; AGFI=0.951; NFI=0.962; CFI=0.974). These results show that calculated commitment is a concept with two sub-dimensions. The “low alternatives” sub-dimension (CCATL) is composed of three items; the “high sacrifice” sub-dimension (CCSAC) is composed of two items. Consequently, hypothesis H3 which stipulates that “calculated commitment is relevant for Beninese civil servants” is validated. Likewise, hypothesis H4, which suggests that “In Benin’s public administration, calculated commitment is a two-dimensional concept composed of two sub-dimensions: ‘high sacrifice’ and ‘low alternatives’” is supported

Indices	Null Model	Unidimensional model of CC	Two-dimensional model of CC
χ^2	448,465	97,753	41,079
ddl (p)	15 (0,000)	9 (0,000)	8 (0,000)
χ^2/ddl	-	7,528	5,135
GFI	-	0,935	0,959
AGFI	-	0,848	0,892
RMSEA	-	0.135	0,108
NFI	-	0,849	0,908
CFI	-	0,864	0,924

Table 6 – Synthesis of the fit indices of the calculated commitment (CC) model

3.3. Correlation analysis between sub-dimensions

Analysis of the correlation shows that the two sub-dimensions of affective commitment are related in different ways to the sub-dimensions of calculated commitment (see Table 7).

Affective commitment based on social attachment (ACSOC) is, for example, negatively and significantly related to calculated commitment based on perceived sacrifice whereas it is not significantly correlated with calculated commitment based on a perceived lack of employment alternatives. This presupposes that the development of an attachment to one’s colleagues reduces the “high sacrifice” calculated commitment, but does not affect the calculated commitment based on a perceived lack of alternatives. Table 7 also shows that the more an employee develops affective commitment based on attachment to organizational values (ACVAL), the higher their commitment based on a lack of alternatives, whereas the ACVAL is not significantly related to the “high sacrifice” calculated commitment. This suggests that the more an employee becomes affectively attached to the values of a public administration, the more they feel that they have little chance of finding a job that meets their expectations outside the public administration; whereas attachment to organizational values has no effect on the perception of sacrifices made for the public administration.

Certain studies have shown, in other contexts, that the sub-dimensions of calculated commitment are related in different ways to certain organizational behaviors and attitudes, such as affective commitment (McGee and Ford, 1987; Meyer *et al.*, 1990; Bentein *et al.*, 2000, 2004). Our results also indicate that the two sub-dimensions of calculated commitment are related in different ways to the two sub-dimensions of affective commitment. These results confirm that the sub-dimensions of affective and calculated commitment I have highlighted in this study are distinct.

4. THE THEORETICAL AND MANAGERIAL IMPLICATIONS

In theory, our results regarding affective commitment contradict the results of previous studies which, for the most part, postulate the unidimensionality of this component of organizational commitment. The question as to its possible multidimensionality had not yet been broached (Meyer *et al.*, 2002; Meyer *et al.*, 1990). In this African context our results indicate that affective commitment is composed of two distinct sub-dimensions: affective commitment based on social attachment (ACSOC) and affective commitment based on the attachment to organizational values (ACVAL). Although a correlation exists between the two sub-dimensions (0.382), they are related in different ways to calculated commitment. It follows that

		ACSOC	ACVAL	CCALT	CCSAC
ACSOC	Pearson’s correlation Sig. (bilateral)	1			
ACVAL	Pearson’s correlation Sig. (bilateral)	,382** ,000	1		
CCALT	Pearson’s correlation Sig. (bilateral)	,080 ,131	,315** ,000	1	
CCSAC	Pearson’s correlation Sig. (bilateral)	-, 173** ,001	,094 ,076	,368** ,000	1

Table 7 – Correlation matrix of the sub-dimensions of commitment
**Correlation is significant at the level of 0.01 (bilateral).

it would be interesting to distinguish them in future research, in order to measure their potential specific effects on behaviors in the workplace. Moreover, these results emphasize the importance of organizational values and social cohesion in the affective commitment of civil servants in Benin. Therefore, the issue of values in the commitment of civil servants toward a target is worthy of attention, as are the conditions for the creation of a social dynamic favorable to commitment within African organizations.

As for calculated commitment, the results of this study confirm the findings of previous studies that postulate the two-dimensionality of the concept (McGee and Ford, 1987; Allen and Meyer 1996; Meyer *et al.*, 2002; Bentein *et al.*, 2000, 2004). In this African context, it is also relevant to distinguish the two sub-dimensions of calculated commitment to improve precision in the analysis of its consequences.

Our results also mention that the dimensions of organizational commitment depend on the cultural and institutional contexts. These realities need to be addressed for a better understanding of the phenomenon in non-Western countries and in Africa in particular. Numerous studies have, for example, mentioned the importance of friendly relations in the workplace (Mutabazi, 2008; Henry, 2008). This study highlights the importance of mobilizing this type of social relations in the affective commitment of African civil servants. It also shows that the affective commitment of these civil servants is not related only to the attachment they feel for the community that is formed by the members of their organization, but also to their attachment to the values of that organization.

On a managerial level, these results make it possible to clearly distinguish the sources of affective and calculated commitment of Benin's civil servants. They therefore constitute a significant contribution to the implementation of public human resources management policies aiming to increase the commitment of civil servants. Our findings offer relevant keys for the orientation of these public policies towards strategies to enhance social relations in the workplace as well as outside the administration. Social relationships in the workplace that are generally seen as counter-productive because of the time spent on forming them, could therefore be beneficial to African public administrations insofar as they constitute a determining

factor in the attachment of civil servants to their organizations. In other words the implementation of management policies focusing on promoting cordial and friendly social relations among civil servants in and outside the workplace would likely create a stronger attachment of civil servants to the public administration.

The promotion of public service values also constitutes an element that could substantially increase the affective commitment of African civil servants. Emphasizing values such as the general interest, altruism, equal treatment by the State, neutrality, responsibility, the public good, solidarity, etc. could result in increasing civil servants' affective commitment based on attachment to organizational values.

Furthermore, the insecurity of the job market in Benin has a strong influence on the calculated commitment of civil servants. The job crisis in the private sector increases the uncertainty costs related to seeking and obtaining new job openings. In comparison to the relatively reassuring conditions in the public sector, the opportunity cost is such that civil servants keep their jobs because they feel that by staying they have more to gain than to lose. The sacrifices that civil servants make to enter the public administration and make a place for themselves, and the sacrifices they make for the administration also foster a form of commitment. Further research is needed to evaluate the consequences of these components of organizational commitment.

CONCLUSION

The purpose of this study was to analyze the relevance and dimensionality of the concepts of affective and calculated commitment as defined by Meyer and Allen (Allen and Meyer, 1990; Meyer and Allen, 1991) in an African public administration. The findings of the two studies conducted in the Beninese public administration show that these concepts are relevant in this context. However, contrary to previous studies, affective commitment turns out to be a two-dimensional concept composed of two distinct sub-dimensions: (1) affective commitment based on social attachment (ACSOC) resulting from an attachment to the bonds of friendship and the community solidarity that civil servants develop between themselves in and outside the organization and (2) affective commitment based on the attachment to organizational values (ACVAL) resulting from their identification with the values and goals of the public administration. These findings indicate that civil servants are affectively attached to a public administration because they are emotionally attached to the values of the organization and to the social life within it.

Calculated commitment, as in some previous research (McGee and Ford, 1987; Meyer *et al.*, 1990; Bentein, *et al.*, 2000, 2004), is a concept with two sub-dimensions in this context. These are calculated commitment based on “low employment alternatives” resulting from the civil servants’ perception of a lack of alternative employment outside the public administration, and calculated commitment based on “high personal sacrifice” resulting from the civil servants’ perception of various sacrifices they have made in order to serve and/or enter the public administration, or that they feel they would make if they decided to leave their job.

All in all, in addition to the sense of duty that is generally quoted as decisive in the relationship between employees and their organization in Africa, our study shows that attachment to organizational values and to the social group formed by the members of the organization, the perception of the lack of alternative employment and of the costs related to various personal sacrifices constitute reasons for the organizational commitment of civil servants. These results also indicate that organizational commitment is not

universally experienced in the same way and its measure and dimensions depend largely on the cultural and institutional contexts of the actors. Therefore, these results cannot be generalized to all African public administrations. Other studies are needed to see if the findings of the present study apply to other African contexts. It would also be interesting to evaluate the validity of the whole Meyer and Allen scale in Africa, and to analyze to what degree the two sub-dimensions of affective and calculated commitment found in this study are associated with other organizational behaviors.

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APPENDIX A - AFFECTIVE COMMITMENT SCALE

Item codes	Sub-dimensions	Items
Rest of career	ACVAL	<i>I would be very happy to spend the rest of my career in this service.</i>
Service problems	ACVAL	<i>I really feel as if this service's problems are my own.</i>
Personal meaning	ACVAL	<i>I do not feel emotionally attached to this service (-).</i>
Emotional attachment	EASOC	<i>I do not feel emotionally attached to this service (-).</i>
Member of the family	EASOC	<i>I do not feel like part of the family in this service (-).</i>
Sense of belonging	EASOC	<i>I do not feel like part of the family in this service (-).</i>

NB : (-) marks reversed items.

APPENDIX B - CALCULATED COMMITMENT SCALE

Item codes	Sub-dimensions	Items
Wish to leave	CCATL	<i>It would be very hard for me to leave this service right now, even if I wanted to.</i>
Life disrupted	CCATL	<i>Too much of my life would be disrupted if I decided I wanted to leave this service right now.</i>
Necessity	CCATL	<i>Right now, staying with this service is a matter of necessity as much as desire.</i>
Options for leaving	removed	<i>I feel that I have too few options to consider leaving this service.</i>
Lack of alternatives	CCSAC	<i>One of the negative consequences of leaving this service would be the scarcity of available alternatives.</i>
Gift of self	CCSAC	<i>If I had not already put so much of myself into this service, I might consider working elsewhere.</i>

Response options: Strongly disagree (1), Disagree (2), Somewhat agree (3), Agree (4) Strongly agree (5).

