E X C H A N G E

CONFIGURAL INVARIANCE OF SHORT MONEY METAPHOR SCALE (SMMS) IN A WHOLE SAMPLE FROM NIGERIA, KENYA AND SOUTH AFRICA: A CROSS-NATIONAL TEST OF HOFSTEDE'S (1980) NATIONAL CULTURE TAXONOMY IN AFRICA.

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Abstract

One of the basis of Generative Money Theory (GMT) and cultural meaning of money literature, 30 items in the domains of Importance, Achievement, and Poverty repulsive obsession were generated. Factor analysis yielded three factors: Importance-Significance, Achievement-dignity and Poverty repulse obsession-neurotic ambivalence. A 15 item Money Metaphor Scale (MMS) was developed on the basis of three of these factors. The study provided a testing ground for two substantive cross-cultural theory: Hofstede's (1980) cross-cultural taxonomy and Nnedum's (2009) classical Generative Money theory. The findings of the study debunk conventional taxonomy that tends to treat Africa as a monolithic culture. The study recommends holistic theoretical approach in dealing with cross-national research on individualism and MOM in Africa. Recognizing the enigmatic issues in cross cultural research will enhance our understanding of organizational behaviour in Africa. Configural Invariance, as well as contextual validity, were determined and discussed.

Keywords: Generative Money Theory, Collectivism Cultural Money Metaphor, Individualism Invariance, Contextual Validity, Nigeria, Kenya, South Africa.

INTRODUCTION

In recent time, classical cross-cultural research tend to suggest that African continent exhibits monolithic culture (Hofstede, 1980). Similarly, substantive global Money attitude hypothesis (Tang, Sutarso, Akande, Allen, Alzubaidi, Ansari, et al; 2006, p. 403) suggests that equivalence of constructs is a core requirement for cross-cultural empirical research. The major purpose of this paper is to illustrate how to assess configural invariance using 15 item 3-factors Short Money Metaphor Scale. In the literature, extant global money attitude hypothesis suggests that widespread socio-economic dawn-turn occasioned by

the global financial crisis is radically altering the money attitude of people and may constrain peoples' meaning of money to a homogenized conceptual world. Empirical evidence indicated that managers from 29 countries share similarities in their meaning of money using the 9-item love of money scale. (Tang et al, 2006, p. 404).

CONFIGURAL INVARIANCE

Management and organizational behaviour researchers defined measurement as the systematic assignment of numbers on variables to represent characteristics of persons, objects or events (Tang et al 2006, p 424; Vandenberg & Lauce, 2000). In the cross-national research, practitioners have become increasingly interested in measurement invariance and, or equivalence, due to recent advances in analytic tools and measurement theories (Cheung & Rensvold, 2002; Tang et al, 2006, p. 424).

In cross-cultural research, studies with an insufficient number of culture (less than or equal to two) should be treated only as a pilot study due to their limited usefulness (Samiee & Jeong, 1994). Consequently, the current study utilized three national samples so that the findings will be more generalizable. At this juncture, it will be necessary to empirically establish confidence that the measures operationalizing the constructs of the meaning of money (MOM) exhibit both conceptual and measurement equivalence across the comparative groups (Riorolam & Vandenberg, 1994, p. 645).

However, many cross-national studies are subject to very severe ethnocentrism (Boyacigiller & Alder, 1991), assuming that a measurement scale developed and used in one culture (e.g. Nigeria) will be universally applicable to other cultures (e.g. the Kenya, or the South Africa). Moreover, without configural construct equivalence, conclusions of studies using an instrument developed in one culture

to assess other cultures could all be flawed (Tang et al, 2006, p. 425). So the question that we ask is, will money metaphor scale developed using Nigerian, (the Igbo) cultural metaphors of money exhibit configural invariance in a sample collected from Nigeria, Kenya and South Africa put together? If it is to exhibit configural invariance, could that be a function of the monolithic culture of Hofstede's (1980) taxonomy; or are there variations in national cultures of the people; if there are statistical variations in national culture with regards to the meaning of money; what then could be the homogenization issue in the configural invariance of MOM belief across Nigeria, Kenya and South?

Cross-Cultural Theory

Hofstede's (1980) empirical taxonomy presented four taxonomy for differentiating perceived culture specific processes. In the current study, one core dimension of Hofstede's dimension of Individualism that was found relevant to the study was selected.

Hofstede's theory explains that differences in people's attitudes are the results of the different "mental programs" that each person acquires, and by which his or her behaviour is determined. Hofstede called these mental programs "culture". Culture refers to the collective mental programming of individuals (Hofstede, 1980). Accordingly, Hofstede used culture as a group and not as an individual attribute. Thus, cultural dimensions could be used to assess the performance of a group of people such as Nigerians, Kenyans or the South Africans. However, there are ample research that have explored the acquisition of culture as an individual attribute (Birnbaum-More, Wong & Olve, 1995, p. 256) because it is, like the "meaning of money", a component of acculturation, enculturation, and socialization. It is apparent, that these mental programs or Hofstede's "cultures" are indeed products of early childhood, reinforced in later

life through socialization and life experiences in a cultural group. Thus, the students as well as managers may be assess on these "mental programs" as individuals in society. It is plausible that individuals vary in the extent to which they gain cultural values, attitudes and behaviours because of individual differences variables such as country of residence.

Nigeria is a multiethnic country characterized by free market economy, federal character and collective revenue allocation system. South Africa is a highly segregated multicultural country that appears to have just stepped out of their chronic apartheid system. Thus, it is apparent that one may expect Nigeria to score higher than South Africa and Kenya on individualism. The following hypotheses are tested:

H1: According to Generative Money theory (Nnedum, 2009); people that share similar Cultural pigeonhole, or metaphorical world view, may have similar life experience; therefore the money metaphor scale, developed from Igbo cultural money metaphors, will exhibit configural invariance performance on an aggregate data from Nigeria, Kenya and South Africa put together as a sample.

H2: According to Hofstede's (1980) Cross-cultural theory, there will be a significant difference between Nigeria, South African, and Kenyan participants on individualism.

METHOD
Participants
A one page questionnaire was distributed to 340 participants and responses collected from 326 students. Of these, 160 were from Nigeria, 70 were from Kenya and 96 were from South Africa. 50.8 percent were male and 49.2 percent were female, 30 percent were white while 70 percent were people of colours, their age ranges from 17 to 28 years with a mean age of 23.73 years.

Instrument
Each participant was asked to complete 30-item original short money metaphor scale (SMMS); a seven point likert-type scale was used for these measures. All the items of these measures were translated into the native common languages in Kenya, Nigeria and South Africa and back translated into English (Brislin, 1980) and regarded as possessing a satisfactory degree of cross-language equivalence (Nnedum, 2009).

The instruments used in the study include the short money metaphor scale (SMMS) and the individualism scale (Ali, 1987). The individualism scale is a 5 item measure. Researchers in each country organized small focus group and translated the English version to their own native language using a multi-stage translation-back-translation procedure (Brislin, 1980). We used a 7-Point Likert type scales. The response scale for both SMMS and individualism scale were: strongly disagree (1); neutral (4) and strongly agree (7). The sample of items of individualism scale include "one should be proud of his own achievement and accomplishments; a man is the best judge of his own best interest; to be successful, one has to rely on himself; Giving personal orders may hurt an 'individuals' feeling and dignities". The reliability (Crombach's alpha) for the total sample was 0.91 (SMMS) and 0.90 (individualism) respectively.

Procedure
The Principal researcher recruited the researchers from Kenya and South Africa. The researchers obtained inform consent from the students individually after permission had been obtained from the institution review board of the Nnamdi Azikiwe University; University of Nairobi and University of Limpopo. The measure was administered to students

during school hours. The responses were collected from the participants after 30 minutes. The response rates were 92 percent for Nigeria, 95 percent for Kenya and 94 percent for South Africa; the overall response rates for the sample were 93.5 percent.

DATA ANALYSIS

Data based on the original 30-item money questionnaire from 326 participants (Nigeria 160, Kenya 70, South Africa 96) were subjected to principal component factor analysis. Using a criterion of eigen values greater than one, followed by the varimax rotation, and a screen-test, three factors were selected for the final short money metaphor scale (SMMS) for the entire sample (15 item, 53.26 percent of the variance while factors 1 accounted for 37.67 percent, factor 2 accounted for 8.77 percent, factor 3 accounted for 6.83 percent). The results are consistent with previous findings (Furnham, 1984; Tang, 1992; Yamauchi & Templer, 1982). Items that had factor loading of 0.40 or greater on a factor were selected. Further configural analysis of the data, country by country yielded three factor structures also. A summary of the whole sample loading were presented in table 1 below,   (see table 1).

Factors of The Short Money Metaphor Scale (SMMS).

Factor 1 had 12 items, which accounted for 37.67 percent of the common variance. It represents the idea that money is "life", i.e. the importance and, or significance of money (Egwu, 1996, p. 43; Mitchell & Michel, 1999, p. 568). Factor 2 contained two items (8.7 percent of the variance and was labeled achievement-dignity. This subscale reveals the idea of dignity in working for money because possession of money is a sign of achievement.

The 20 item of factor 3 were best characterized as poverty repulsive obsession which

accounted for 6.83 percent of the variance. In Africa, money is life (Egwu, 1996, p. 43), further "one who has no money is insignificant (Egwu, 1996, p. 42).

Table 1: Factor loading for the short money metaphor scale item

Factor 1: Importance/significance Loading

1.	One who has no money is insignificant	.55
3.	Whatever money cannot do, cannot be done and remains undone	.64
4	Money is life	.73
5	Money is freedom	.72
6	Money is respect	.81
10	Money is love	.79
11	Money is the shining star of a person	.70
12	It is better to arrive late to an occasion with money than arriving early without money	.69
13	Money is rest of mind	.89
14	Money is everything	.76
15	Money is the blood of life	.86
16	Money can open all doors	.86

Factors 2: Achievement –Dignity

17	Money is a good possession	.67
18	I work for my money	.70

Factors 3: Poverty Repulse –Neurotic Ambivalence

19.	Money is restless life	.83
20.	Money is time	.61

Reliability

The reliability (Crombach's alpha) for the Nigerian, Kanyan and South African samples are .91, .89, as for SMMS and .94, .92 and .90 for individualism. The crombach alphas for each of the three subscales of SMMS for the total sample are: .88; .72 and .64, respectively. The test-retest reliability (four weeks apart) for each of the three subscales of the total sample are: 0.83, 0.91 and 0.91, respectively. Thus, the SMMS Scale has satisfactory inter-item consistency and test-retest reliability.

Contextual Validity Of SMMS

The reliability (crombach's alpha for the total sample, was 0.88 (SMMS) and .92

(individualism), respectively. The factor structure of the SMMS yielded 3 dimensional components in each country studied. The whole sample data also yielded three factor structures. Application of one group t-test on the total sample data indicated that there were variations in the composition of the whole data, t(325) = 54.87, P <.000. Thus, there were significant variations in the total sample. It implies that the sample data contained various national groups. That the aggregate African data differs in their composition, this composition reflects their national cultures. Hofstede's (1980) taxonomy needs to recognize the variations in people's culture as a veritable issue in cross-national and cross-cultural research. Specifically, the result indicated that the whole sample contained data from various cultural group. At the same time, these groups have similar ways of seeing money. Their meaning of money has three dimensions. One, money is important and significant to them, it reflects their achievement in society and they try at all times to live above poverty line.   Nnedum's (2009) Generative Money Theory finds systematic support based on the principles of configural invariance of SMMS. It is plausible that Hofstede's culture and Nnedum's generative theory can help researchers understand a key purpose of culture and the significance of cultural money metaphors in Africa. The configural invariance of SMMS in a whole sample as well as in the aggregate data from Kenya, Nigeria and South Africa underscores the fact that cultural meaning of money ascribed to by a particular group of people, like Nigerians, are likely to have a significant influence on the attitude of the individual members of that society.

RESULTS

The result of the table 1 indicated the configural invariance of the SMMS in a sample of aggregate data from three national cultures from Africa: Nigeria,

Kenya and South Africa. The result supported hypothesis one that stated that the short money metaphor scale (SMMS) developed with Igbo cultural money metaphor will exhibit configural invariance on a sample of aggregate data from the Nigeria, the Kenya and the South African students. Thus hypothesis 1 was confirmed. The study also compared the performance of the Nigerian, the Kenyan and the South African students on individualism (Ali, 1987) construct. The hypothesis 2 that there will be significant difference between the Nigeria, the Kenya and the South African students on individualism construct, was tested using univariate one-way ANOVA. The mean scores and standard deviation of the groups compared were presented in table 2a.

Table 2a: Mean and Standard Deviation, scores of national culture groups on individualism construct

Description	Nigeria	Kenya	South Africa	All the sample
M	23.38	20.72	22.26	22.49
SD	04.12	05.29	04.96	04.74
C-I	22.74-24..01	19.48-21.98	21.26-23.29	21.94-22.99
Std Error	.32	.63	.51	.26
N	164	71	96	331.

The result showed that there were differences in reported value of individualism among the national groups: Nigerian students scored highest, with (M=23.38, SD=4.17, C-1 =22.74-22.01, N=164); while South African students came second, with (M=22.26, SD=4.96, C-1=22.74-22.01, N=96), whereas Kenyan students had the lowest mean score, with (M=20.73, SD=5.29, C-1= 19.48-21.98, N=71). In addition, one-way ANOVA univariate F test was performed on the aggregate data to test the hypothesis that there will be a significant difference between Nigerian, the Kenya and the South African students on the value of individualism. The result of F statistics revealed significant difference between the national groups on individualism, with F (2,328) = 8.22, P<.000. The

hypothesis 2 received full support. Furthermore to determine which of the national groups endorsed the value of individualism most than the others, pair-wise post-hoc test for comparison of the means by least significant Difference (LSD) were conducted for the three national group's mean and the result were presented in table 2b.

Table 2b: Pair-wise post hoc (LSD) Comparisons of group's means scores on individualism.

Nation Country (1)	Groups Versus Country (J)	Mean Difference	Stand Error	Confidence Intervals
Nigeria-Kenya	2.65*	.66	.000	-1.35-3.94
Nigeria-South Africa	1.12	.60	.02	-.06-2.29
Kenya-Nigeria	-2.65*	.66	.00	-3.96-(-)1.35
Kenya-South-Nigeria	-1.53*	.73	.036	-2.96-(-).10
South Africa-Nigeria	-1.12	.60	.062	-2.29.06
South Africa-Kenya	1.53*	.73	.036	-.10-2.96

The result indicated that Nigerian students endorsed value of individualism construct more than South Africa (MD=1.12, P<0.6) and more than Kenyan (MD =2.65, P<.000) students respectively; whereas South African students received higher scores of individualism value than Kenyan students (MD=1.53, P<03). The result confirmed that there is a significant difference between Nigerian, Kenya and South African students on the Hostede's value of individualism (Ali, 1987). Specifically, Nigerian students received most individualism scores, while South African students received more individualism

scores; whereas Kenya students received many individualism scores in that order. The hypothesis 2 was confirmed.

DISCUSSION

The meaning of money is a multi-dimensional constructs in Nigeria, Kenya and South Africa. The people's meaning of money can be measured using the 15 item 3- factor short money metaphor scale version in Africa. The meaning of money is very important and significant to an individual because it is not on a sign of achievement in society but it instills dignity and honour to the individual; hence, people tend to perceive money as their blood of life and are apt to obsessively, continuously and consistently repulse poverty in their life.

People who believe that money is important and significant in their life may think, that one who has no money is insignificant; that whatever money cannot do cannot be done and will remain undone; that money is life, freedom, love and rest of mind; that money is the shining star of a person, that money is everything and can open all doors. However, people do work for their money not only because money is a good possession but for the mere fact that money is a sign of achievement as well as a source of dignity in society. In African society, people are aware that money is time, so people spend a lot of time working to earn more money.

They may like a restless life making money not just because money is good but for the mere fact that they want to jump the poverty hurdle and they want to continuously repulse, avoid, and suppress the neurotic ambivalence of falling back below the poverty hurdle line. Apparently, the money metaphor of the Igbo people of Nigeria receives congruence in meaning among Kenyan and South Africa participants; hence, the configural invariance of the SMM scales in the sample population. It should be pointed out that

configural invariance of the scale reflected the similarities in the understandings of the meaning of money (MOM) in Nigeria, Kenya and South Africa. People ascribe same or similar meaning to money. Since individuals have taken their cues for development of their meaning of money from those of their cultural money metaphors, there is likely to be much overlap between cultural money metaphor that are expressed by individuals and those representatives of the overall national culture.

However, this line of understanding does not necessarily mean that the individuals share all of the culture's perceptions. In the present study, cultural orientation framework (Hofstede, 1980), suggests that one need to consider the variance in individualistic value that exists between nations. Nigeria and South Africa are high individualistic cultures whereas Kenya is a Low individualistic nation. Apparently the individualistic values vary from one nation to the other. Thus, the study suggests that there are variations in individualistic values of people in Nigeria, South Africa and Kenya. While Nigerian and South Africans highly endorse and highly receive individualistic value scores, Kenyan students endorse and highly receive low individualist value score respectively. It is plausible that the Nigerian students just like the South African students, are much more likely, than Kenyan students to be proud of their own achievements and their personal accomplishments because a man is the best judge of his own best interest.

Research Implication

A word for researchers is that this data set is small relative to the population of Nigeria, South African and Kenya, therefore, the result need to be interpreted with caution.

Furthermore, it will be necessary to analyze the configural invariance measure country by country due to possible influence of national cultures. These study recommend the inclusion of Hofstede's culture perception. Constructs in future cross-cultural studies on the meaning of money in African continent. It is plausible that Hofstede's taxonomy of masculinity, power distance, feminism and collectivism may help researchers understand the influence of cultural "mental program" on people's MOM in African. More research is needed to fully establish the construct validity and momolorical network of association in which the Short Money Metaphor Scale (SMMS) exists (Anastasa, 1988).

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