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Research Article

FACTOR ANALYTIC MODEL OF THE IMPACT OF ICT ON THE PRODUCTIVITY OF AGRICULTURAL BUSINESS IN FEDERAL CAPITAL TERRITORY, ABUJA, NIGERIA

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A B S T R A C T

Investment on ICT projects in all the sectors of the world economy has been on the increase in the past years. This paper proposes thirty five performance indices of ICT on the productivity of agricultural business in the Federal Capital Territory (FCT) of Nigeria and a tool for evaluating their impact. The indices were surveyed by administering questionnaires and holding meetings/interviews with agricultural business stakeholders. The performance indices were subjected to factor analysis by principal components using Statistical Package for Social Scientists (SPSS). Seven factors were extracted and the percentage contributions of each factor to the productivity of agricultural business were estimated. The total sum of the percentage contributions of the seven factors was found to be less than 100. This revealed that there were some extraneous factors whose related performance indices were not considered in the administered questionnaire which were liable to play significant role in the productivity of agricultural business. Moreover, a factor scores coefficient matrix that can be used to estimate and rank the assessment of each Respondent was generated.

INTRODUCTION

The role of ICT in both the public and private sectors of the world economy has been widely discussed in the literature. The capital investment on ICT infrastructure in both the public and private sectors of the world economy has been on the increase in the past years. ICT projects are conceptual in nature, pure thought stuff, infinitely milleable, invisible and unvisualizable; hence, there are often inherent risks and uncertainties associated with them [Brooks 1987]. In [Ewusi-Mensah 1997], ICT projects were considered to be dynamic and involve groups of experts and professionals where the knowledge of ICT of one group varies from one to another. Thus, ICT projects are subject to the vagaries of group dynamics, interactions, coordination and communications.

The survey of ICT projects in Chile, Latin America carried out in [Fuller and Pino 1992] attributes the success of ICT projects to the Chilean national drive on the development of indigenous application software. In [Akinyokun1993a], a comprehensive survey of the attitudes of Nigerian towards computers is carried out by administering questionnaire with a view to classifying respondents into three major categories. There is a class which feels threatened by the computer system and thus have the fear that computerization of operations in corporate organization may lead to unemployment. The second class of people is passionately committed to the computerization of the operations in corporate organization with a view to optimizing productivity and thus sees computers as a beneficial tool to humanity. There is the third class of people who are apparently confused about the capabilities and limitations of computers and therefore sees computer as an awesome machine.

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The human factors in failed ICT projects are studied in [Wilson 1998, Akinyokun and Chiemeke, 2006] by taking a random survey of some selected companies and individuals that are involved in the planning, implementation and management of ICT projects. The survey of ICT projects carried out in [Akinyokun and Chiemeke, 2006] reports eleven factors and out of these, a high premium is placed on the factor which involve users in the planning, iimplementation and management of ICT projects.

In [Akinyokun O.C., 1985], the algorithm for the automation of Pay As You Earn (PAYE) income tax systems in Oyo State of Nigeria is presented. The income from indirect taxes constituted the single most important source of revenue in Nigeria between 1961 and 1971. At the beginning of the oil boom in the 1970s, the contribution of indirect taxes to the revenue of the country fell from 58% in 1970 to 12% in 1980 and 13% in 1990. The oil boom caused a drastic fall in the contributions of agricultural sector to the national economy as well as favourable disposition of Nigerians for very high tasty goods and services. The middle class income earners suddenly collapsed, thus leaving a wide gap between the poor and the rich in Nigerian society.

The global recession of the 1980s exposed the structural weakness of the petroleum based economy of Nigeria. As the oil prices dropped, the economy found itself in the throes of chronic disequilibrium. The development compelled the Federal Government to resort into various policies calculated at moderating the deteriorating economic conditions. As part of the government Structural Adjustment Programme (SAP), a move was made to overhaul the system of indirect taxation with a view to making it more effective and efficient. The ultimate goal was to reduce taxation on income while increasing taxation on consumption of some goods and services. Moreover, there was the intention to reduce government over dependence on the volatile oil driven revenue. The Federal Government consequently introduced Sales Tax in 1986. The success story of the Sales Tax motivated the Federal Government to set up a study group on indirect taxation in 1991. The study group presented two reports with a strong recommendation for the introduction of Value Added Tax (VAT) to replace the existing Sales Tax. In [Akinyokun 1993b, Akinyokun 1993c], the framework for the computerization of VAT were presented. The VAT has made tremendous contributions to the national revenue since 1994 and its impact has been felt in major areas of development in the country. The global recession of the 1980s repeated itself in Nigeria in 2015. The development compelled the Federal Government to reduce government over dependence on the volatile oil driven revenue and consequently diversify petroleum economy for agricultural business and other mineral resources.

The importance of ICT in the diversification process is very primary. Thirty five ICT performance indices on agricultural business were identified and used to design a questionnaire. Three hundred copies of the questionnaire were used to survey and raised questions/interviews with agricultural business stakeholders in the Federal Capital Territory. Three hundred respondents returned duly completed questionnaires. The responses were verified and validated by a follow up with personal interviews and meetings with the stakeholders of agricultural business. The responses were thereafter subjected to factor analysis by principal components using Statistical Package for Social Scientists (SPSS) Version 10.0 and seven factors were extracted. The total sum of the percentage contributions of the seven factors was found to be less than 100. This revealed that there were some extraneous factors whose related performance indices were not considered in the administered questionnaire which were liable to play significant role in the productivity of agricultural business. Further statistical analysis was carried out to generate the eigenvalues of the extracted factors. The eigenvalues form the basis for estimating the contributions of the extracted factors to the success of ICT in agricultural business. Moreover, a system of linear equations which can be used to estimate the assessment of each Assessor of ICT for agriculture projects is proposed.

Evaluation of Performance Indices of ICT ON AGRO-Business

The performance indices of ICT on Agricultural Business are many and they relate to one another. The general form of the mathematical model for evaluating the n performance indices by m respondents is presented as:

$$Y_{i,} = \sum_{k=1}^{n} a_{i,k} X_k \qquad\qquad i = 1,2,3,4, \ldots\ldots m$$

where Y_i represents the ith assessor's observation of performance index $X_{k,}$

$a_{i,k}$ represents the assessment of kth. performance index by ith. Assessor.

This mathematical model can be expressed as:

$$\begin{pmatrix} Y_1 \\ Y_2 \\ . \\ . \\ . \\ Y_m \end{pmatrix} = \begin{pmatrix} a_{1,1}X_1 + a_{1,2}X_2 + a_{1,3}X_3 + a_{1,4}X_4 + \ldots + a_{1,35}X_{35} \\ a_{2,1}X_1 + a_{2,2}X_2 + a_{2,3}X_3 + a_{2,4}X_4 + \ldots + a_{2,35}X_{35} \\ . \quad . \quad . \quad . \quad . \\ . \quad . \quad . \\ . \quad . \quad . \quad . \\ a_{m,1}X_1 + a_{m,2}X_2 + a_{m,3}X_3 + a_{m,4}X_4 + \ldots = a_{m,35}X_{35} \end{pmatrix}$$

The factor analysis by principal components is adopted in the evaluation of the formulated indices with a view to obtaining some clusters. The clusters would be taken as the factors whose contributions to productivity of agricultural business could be estimated. The realization of this objective is based on the generation and use of the following statistics:

1. Descriptive statistics
2. Correlation matrix
3. Bartlet's test and Kaiser-Mayer Olkin (KMO).
4. Communalities.
5. Initial factor loadings.
6. Rotated factor loadings.
7. Factor score coefficient matrix.
8. Eigenvalues.

The descriptive statistics presents the mean and standard deviation of the raw score of each performance indices given by the sample Assessors. While the correlation matrix presents the degree of pair wise relationships of the performance indices, the Bartolett and KMO tests are used to test the adequacy of the sample population. In factor analysis, there is a set of factors which is generally referred to as 'common factors' each of which loads on some performance indices and another set of factors which are extraneous to each of the performance indices. The proportion of a variance of a performance indices explained by the common factor is called the 'communality' of the performance indices. The communality of a performance index ranges between 0 and 1, where 0 indicates that the common factors explains none of the variance and 1 indicates that all the variance is explained by the common factors.

The component matrix presents the initial factor loadings. The factor loadings associated with a specific index is simply the correlation between the factor and the standard score of the index. The degree of generalization found between each index and each factor is referred to as 'factor loading'. The farther away a factor loading is from zero in the positive direction, the more one can conclude the contribution of the index to a factor. The component matrix can be rotated by varimax, promax, equamax or quartimax for the purpose of establishing a high correlation between indices and factors. The factor score coefficient matrix which can be used to evaluate the assessment of each Assessor is generated. The eigenvalues and percentage variance of the factors extracted are generated, as well, for the purpose of evaluating the contributions of each factor to the success of agricultural business.

Case Study of ICT Performance Indices

Thirty five performance indices of ICT which constituted the major component of the questionnaire presented in Appendix A were formulated. The stakeholders of agricultural business in the Local Governments within Federal Capital Territory in Nigeria were surveyed by administering three hundred questionnaires. Preliminary meetings were held with the stakeholders of the agricultural business prior to the design of the questionnaire. The budget and schedule of activities, in quantitative term of the projects did not feature in the questionnaire because they were claimed to be classified and confidential information by the stakeholders. The questionnaire requires the respondents to rate each of the performance indices using a 5-point Likert Scale of 'Excellent', 'Very Good', 'Good', 'Average' or 'Poor'. All the three hundred questionnaires were duly completed and submitted. The verification and validation of the returned questionnaire were based on a follow up through interviews and meetings with the respondents. Thereafter, the data obtained from the returned questionnaire were subjected to factor analysis by principal components using Statistical Package for Social Scientists (SPSS) Version 10.0.

The descriptive statistics of the obtained data presents the mean and standard deviation of the rating of the performance indices of ICT by the sampled respondents as shown in Appendix B. The 35x35 correlation matrix of the performance indices generated is a large one which could not be included in this paper shows that the highest correlation of 0.674 exists between the 'ICT can provide qualitative and functional education about collaborations with agriculural market and farmers' and 'ICT can provide qualitative and functional education about weather conditions and consequences'. The implication is that these two performance indices are likely going to share the same factor. The least correlation of –0.076 exists between 'ICT can provide qualitatitive and functional education about high yield of produce, harvest period and storage' and 'ICT knowledge can contribute to the high productivity in agricultural business'. The implication is that these two performance indices are not likely going to share the same factor.

The Bartlett's test produces a χ^2 of 2894.445 with degree of freedom of 595 and a significance level of 0.000, which indicates the adequacy of the sample population. The Kaiser-Mayer Olkin (KMO) test produces a measure of 0.898 which confirms the adequacy of the sample population. The results obtained from the Bartlett's test and KMO test are good indicators of the suitability of the application of factor analysis as well. The communalities of the performance indices generated are presented in Appendix C. The communality of the 'ICT is Exciting and Fascinating' is 0.737 (73.70%) which implies that 73.70% of the variance in 'ICT is Exciting and Fascinating' can be explained by the extracted factors, while the remaining 26.30% is attributed to extraneous factors.

Based on Social Science rule that only the performance indices with loadings equal to or greater than 0.4 and percentage greater than 1 should be considered meaningful, the initial principal component matrix, which is made up of seven factors were extracted. In order to obtain realistic and meaningful factor loadings, the initial principal component matrix is rotated by orthogonal transformation by varimax, promax, equamax, quantimax and oblique. However, the result obtained from the rotation by quatimax-varimax which is presented in Appendix D appears to be the most realistic and meaningful for interpretation among all the others. Consequently, it is used for the purpose of this analysis. The seven factors with their corresponding loadings are as follows:

Factor 01 loads on the following performance indices:

17	ICT can provide qualitative and functional education about where to obtain funds and other agricultural inputs
01	ICT is exciting and fascinating
20	ICT tools can be used in the production of appropriate feeds for poultry/fish/animal husbandry
11	ICT can provide qualitative and functional education about land acquisition and preparation
07	ICT can gradually take over many operations of agricultural organizations
04	ICT can enhance human reasoning in agricultural business
10	ICT can bridge the gap between the rich and the poor
22	ICT can provide qualitative and functional education about collaborations with agricultural market and farmers
03	ICT can be used for evil purposes if they fall into wrong hands
13	ICT can provide qualitative and functional education about pests and diseases
14	ICT can provide qualitative and funcICT can provide qualitative and functional education about soil fertilizers applications and where to obtain them
09	ICT knowledge can guide one in the type of agricultural business
35	Women youths constitute a major portion of the population involved in the marketing of produce in Nigeria
34	ICT can create a more formal marketing system based on production and market intelligence that can actually enable sales even before actual production.
12	ICT can provide qualitative and functional education about the types of farming, crops to plant and plant seasons
23	ICT can facilitate the acquisition of better farming skills through training
06	ICT knowledge can contribute to the high productivity in agricultural business
21	Nearness of farmers to ICT service centre can enhance the adoption of IGT for farming
33	ICT can facilitate collaboration and sharing of strategies and good practices
15	ICT can provide qualitative and functional education about weather conditions and consequences
16	ICT can provide qualitative and functional education about collabiorations with agricultural markets and farmers
26	ICT can provide access to information on the best planting techniques

Factor 02 loads on the following performance indices:

06	ICT knowledge can contribute to the high productivity in agricultural business
27	Belonging to farmer associations encourages the use of ICT for guidelines
31	ICT enhances the empowerment of youths and women in agricultural business
29	ICT tools can stimulate the interest of youths in farming
05	ICT can assist in planning, policy formulation, decision making and forecasting in agricultural business
33	ICT can facilitate collaboration and sharing of strategies and good practices

Factor 03 loads on the following performance indices:

14	ICT can provide qualitative and functional education about soil fertilizers, applications and where to obtain them
15	ICT can provide qualitative and functional education about weather conditions and consequences
16	ICT can provide qualitative and functional education about collaborations with agricultural market and farmers
28	Initial cost of owning ICT facility hinders the adoption of ICT for farming
30	ICT can play great roles in improving agricultural governance
32	ICT can reduce the gap between imports and exports

Factor 04 loads on the following performance indices:

02	ICT is very important to the advancement of agricultural business
08	ICT tools can make serious mistakes if not properly guided by the human expert that develop them
28	Initial cost of owning ICT facility hinders the adoption of ICT for farming

Factor 05 loads on the following performance index:

26	ICT can provide access to information on the best planting techniques

Factor 06 loads on the following performance index:

18	ICT can provide qualitative and functional education about high yield of produce, harvest period and storage

Factor 07 loads on the following performance indices:

25	ICT can provide information on the right quantity of chemical to use
19	ICT can provide qualitative and functional education about market information and mode of transportations

The generated factor score coefficient matrix used for the assessment of each Assessor of the indices is derived from the linear equation presented as follows:

$$C_{i,j} = \sum_{k=1}^{35} b_{k,j}S_{i,k} \qquad i = 1,2,3,4, \ldots\ldots n; \; j = 1,2,3, \ldots\ldots, 7$$

where: $C_{i,j}$ represents the contribution of ith assessor to jth factor,
$b_{k,j}$ represents the factor score coefficient of kth performance index for jth factor,
$S_{i,k}$ represents the standard score of ith assessor for kth performance index and
n represents the population of the sampled assessors.
$S_{i,k}$ is obtained from [Uzoka and Akinyokun 2004] by:
$S_{i,k} = A + (x_i - y_i)/d_i$
where: A represents the allowable minimum raw score for performance index; in this instance, it is 1;
x_i represents the raw score of ith performance index;
y_i represents the mean of the raw scores of ith performance index by the sampled Assessors;
d_i represents the standard deviation of the raw scores of ith performance index by the sampled Assessors.
For each sampled Assessor, the system of linear equations for the seven extracted factors can be represented as follows:

$$\begin{pmatrix} b_{1,1}S_{i,1} + b_{2,1}S_{i,2} + \ldots\ldots\ldots + \ldots + b_{35,1}S_{i35} \\ \ldots\ldots\ldots \; + \ldots\ldots\ldots \; + \ldots\ldots \; + \ldots + \ldots\ldots\ldots \\ b_{35,7}S_{35,7} + \ldots\ldots\ldots\ldots\ldots\ldots\ldots \; + b_{35,7}S_{7,35} \end{pmatrix} = \begin{pmatrix} C_{i,1} \\ \ldots. \\ C_{i,7} \end{pmatrix}$$

In an attempt to evaluate the percentage contribution of each factor to the overall success of agricultural business, the eigenvalue of each factor is generated and presented in Appendix E. The eigenvalue of jth factor denoted by 'E_j' is calculated by:

$$E_j = \sum_{k=1}^{35} X^2_{i,j} \qquad i = 1,2,3,4, \ldots\ldots 35; \; j = 1,2,3, \ldots\ldots, 7$$

where $X_{i,j}$ represents the loading of jth factor on ith performance index.

The eigenvalue is used to indicate how well each of the extracted factors fits the data from the sample. The percentage contribution of each factor to the overall impact of ICT denoted by 'P' is estimated from: $P = 100E_j/n$ where n represents the number of performance indices considered in the study. Table 1 presents the eigenvalues, percentage contribution and cumulative percentage contribution of the extracted seven factors. Thus, the seven factors contribute a total of 65.22% to the impact of ICT on the productivity of agricultural business in FCT.

Table 1 Total Variance Explained

Extraction Sums of Squared Loadings			
Factors	**Total**	**% of Variance**	**Cumulative %**
1	14.496	41.42	41.42
2	2.108	6.02	47.44
3	1.556	4.45	51.89
4	1.306	3.73	55.62
5	1.238	3.54	59.16
6	1.064	3.04	62.20
7	1.060	3.02	65.22

The factor one which is described as the importance of ICT to agricultural business contributes 41.42% out of the 65.22%. This statistics suggest that many agricultural business in the FCT would do better if ICT is fully incorporated into their activites. This lay emphasis on the global role of ICT and its relevance in all sphere of human endeavours in the world today. The remaining 34.78% is attributed to the contributions of some extraneous factors which are external to the proposed performance indices of ICT reported in this paper. Typical examples of the extraneous factors are:

1. Government and statutory changes.
2. Economic and trade fluctuations.
3. Re-organization and restructuring.
4. Social, cultural, economic and political issues such as bureaucratic mindset that may take ICT as a tool for government automation rather than as a tool for government transformation.
5. Natural and artificial hazards.
6. Coherent cooperation, coexistence and concerted programmes of the hardware and software maintenance engineers.
7. Deforestation by fire.
8. Pollution of water.
9. Herdsmen and farmers collution.

CONCLUSION

The factor analysis by principal components has been adopted for the evaluation of performance indices of ICT on the productivity of agricultural business. Seven factors were extracted and each of them adequately loaded on some performance indices. The initial principal component matrix generated was subjected to orthogonal transformations for the purpose of obtaining meaningful factorization of the performance indices of ICT projects by varimax, promax equamax quantimax and oblique. The result obtained by quatimax-varimax was found to be the most meaningful. Seven factors were generated and their loadings were reported. Factor score coefficient matrix was generated with a view to providing the basis for measuring the degree of goodness of the assessment of each respondent of ICT performance indices. The eigenvalue of each factor was calculated and used for the evaluation of the percentage contribution of each factor to the success of agricultural business. The fact that the overall percentage contributions of the extracted factors is less than

100 is an evidence that some latent factors (extraneous factors), whose related performance indices were not considered in the administered questionnaire, play significant roles in the impact of the performance indices of ICT. The results obtained place a high premium on ICT as a veritable tools for agricultural business to strive. It is therefore implied that many agricultural business would not do well today if ICT is not given consideration.

Appendix A: Administered Questionnaire

Respondent Use of ICT

Excellent
Very Good
Good
Good
Average
Poor

Respondent Age

0 - 10
11- 20
21 -30
31 – 40
41 – 50
51 – 60
61 – 70
Above 70

Respondent Council Area

AMAC
Abaji
Gwagwalada
Bwari
Kwali

Respondent Type of Farming

Crop
Fishery
Poultry
Animal husbandry

Respondent Farm Size

Less than 1 hectare
1 – 2 hectares
Greater than 2 hectares

S/N	Performance Indices	Excellent	V. Good	Good	Average	Poor
01	ICT responses are amazing and triggers ones imagination					
02	ICT is very important to the advancement of agricultural business					
03	ICT can be used for evil purposes if they fall into wrong hands					
04	ICT can enhance human reasoning in agricultural business					
05	ICT can assist in planning, policy formulation, decision making and forecasting in agricultural business					
06	ICT knowledge can contribute to the high productivity in agricultural business					
07	ICT can gradually take over many operations of agricultural organizations					
08	ICT tools can make serious mistakes if not properly guided by the human expert that develop them					
09	ICT knowledge can guide one in the type of agricultural business					
10	Cost of ICT infrastructure can discourage its application in agricultural business					
11	ICT can provide qualitative and functional education about land acquisition and preparation					
12	ICT can provide qualitative and functional education about types of farming, crops to plant and plant seasons					
13	ICT can provide qualitative and functional education about pests and diseases					
14	ICT can provide qualitative and functional education about soil fertilizers, applications and where to obtain them					
15	ICT can provide qualitative and functional education about weather conditions and consequences					
16	ICT can provide qualitative and functional education about collaborations with agricultural market and farmers					
17	ICT can provide qualitative and functional education about where to obtain funds and other agricultural inputs					
18	ICT can provide qualitative and functional education about high yield of produce, harvest period and storage					
19	ICT can provide qualitative and functional education about market information and mode of transportations					
20	ICT tools can be used in the production of appropriate feeds for poultry/fish/animal husbandry					
21	Nearness of farmers to ICT service centre can enhance the adoption of ICT for farming					
22	ICT can help in the exchange of knowledge and ideas with fellow farmers					
23	ICT can facilitate the acquisition of better farming skills through training					
24	ICT can help in location of marketers for farm products					
25	ICT can provide information on the right quantity of chemical to use					
26	ICT can provide access to information on the best planting techniques					
27	Belonging to farmer associations encourages the use of ICT for guidelines					
28	Initial cost of owning ICT facility hinders the adoption of ICT for farming					
29	ICT tools can stimulate the interest of youths in farming					
30	ICT can play great roles in improving agricultural governance					
31	ICT enhances the empowerment of youths and women in agricultural business					
32	ICT can reduce the gap between imports and exports					
33	ICT can facilitate collaboration and sharing of strategies and good practices					
34	ICT can create a more formal marketing system based on production and market intelligence that can actually enable sales even before actual production					
35	Women youths constitute a major portion of the population involved in the marketing of produce in Nigeria					

Appendix B: Generated Descriptive Statistics

Index	Mean	Stand. Dev.
A1	3.91	1.053
A2	3.50	1.461
A3	3.87	1.109
A4	3.80	1.051
A5	3.58	1.005
A6	3.71	1.129
A7	3.72	1.091
A8	3.78	1.157
A9	3.66	1.118
A10	3.91	1.644
A11	3.79	1.050
A12	3.85	1.142
A13	3.77	1.095
A14	3.78	1.100
A15	3.75	1.137
A16	3.76	1.061

A17	3.69	1.160
A18	3.79	3.299
A19	3.80	1.030
A20	3.74	1.112
A21	3.68	1.056
A22	3.79	1..105
A23	3.87	1.086
A24	4.06	3.661
A25	3.91	2.297
A26	3.80	1.158
A27	3.64	1.032
A28	3.69	1.109
A29	3.84	.945
A30	3.72	1.021
A31	3.66	1.134
A32	3.52	1.133
A33	3.86	1.060
A34	3.85	1.126
A35	3.74	1.174

Appendix C: Generated Communalities

Index	Communalities
A1	.737
A2	.706
A3	.724
A4	.692
A5	.696
A6	.682
A7	.587
A8	.632
A9	.574
A10	.616
A11	.648
A12	.676
A13	.699
A14	.682
A15	.774
A16	.686
A17	.681
A18	.718
A19	.655
A20	.682
A21	.429
A22	.641
A23	.627
A24	.258
A25	.712
A26	.767
A27	.719
A28	.608
A29	.631
A30	.701
A31	.690
A32	.614
A33	.677
A34	.637
A35	.570

Appendix D: Generated Rotated Component Matrix by Quantimax-Varimax

	Factors						
	1	2	3	4	5	6	7
A17	.763						
A1	.714						
A20	.712						
A11	.692						
A7	.687						
A4	.668						
A10	.657						
A22	.635						
A3	.625						
A13	.605						
A14	.596		.440				
A9	.579						
A35	.571						
A34	.570						
A12	.568						
A23	.559						
A6	.494	.430					
A21	.476						
A27		.805					
A31		.800					
A29		.692					
A5		.669					
A33	.467	.478					
A30			.663				
A15	.521		.648				
A16	.493		.628				
A32			.526				
A28							
A2				.762			
A8				.677			
A28			.417	.603			
A26	.468				.620		
A24							
A18						.826	
A25							.798
A19							.489

Appendix E Generated Component Transformation Matrix

Factors	1	2	3	4	5	6	7
1	.744	.386	.384	.310	.228	.024	.030
2	.316	.895	.008	.284	.064	.091	.070
3	.236	.020	.316	.156	.042	.822	.378
4	.259	.008	.025	.581	.128	.465	.602
5	.119	.214	.701	.513	.312	.255	.153
6	.452	.052	.201	.398	.415	.036	.649
7	.071	.017	.469	.200	.810	.183	.212

Extraction Method: Principal Component Analysis
Rotation Method: Varimax with Kaiser Normalization.

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