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Influence of Organisational Factors on E-Business Value and E-Commerce Adoption

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ABSTRACT

In an era of globalization, economies over the world have become increasingly international and competitive. According to Alahuhta et al (2005), the last three decade has seen a massive revolution in technology use at both individual and organizations level with several organizations replacing the manual system of operation with modern technologies and computer powered machines. Acheampong, et al (2017) explain that three decades ago it was a dream to conceive that at a point in time all of the world's knowledge could be put on a single world wide web and browsed by people from different parts of the world for free. These are the realities of the contemporary business place which Casey & Wilson-Evered (2012) explained has been facilitated by the advances in technology and globalization. According to Zaremohzzabieh, et al (2014), e-commerce platform appeared along with the development of internet and the necessities of ventures has given a web-based exchanging spot to customers and suppliers. It is a virtual system for purchasers and merchants, utilizing computer programming technology to coordinate assets on the web and accomplish the objective of community program (Ruzzier, AntonciC, Hisrich, & Konecnik, 2007). E-commerce platform gives all members equivalent and public information location of many services. Merchants can disseminate product information on e-commerce platforms, while purchasers can get a wide range of information without going outside (Strauss, 2016). As a new trend in the economic development and a new pattern of future business advancement, e-commerce platform plays a critical part with many attributes i.e. third party, service nature, neutrality and integration (Ling, et al, 2010).

Keywords : E-Business, E-Commerce, SME, Diffusion of Innovation

I. INTRODUCTION

Ecommerce literature explains that lack of top management support is a significant barrier to full deployment of EC in SMEs context (Lawrence & Tar, 2010). Top management support refers to the extent to which top managers acknowledges EC as that time and strategic tool in order to improve performance and gain competitive advantages in an organization (Saprikis & Vlachopoulou, 2012; Zheng, Chen, Huang, & Zhang, 2013). Top management commitment support is posited to have a direct effect on adoption and that a positive behaviour on the part of managers toward change creates a business environment that is ready to adopt EC, when coordination across business units and conflict resolution are crucial (Damanpour & Schneider, 2006; Zheng et al., 2013). Mirchandani and Motwani (2001) argued that the support from top management is important and can be clearly differentiated between adopters and non-adopters of e-commerce.

The top management oversees all activities of the organization (Singh & Kant, 2008), and outlines a clear direction to assist the employees. EC adoption and use will succeed only if the top manager/owner is entirely committed beyond public declaration. Top management commitment is an enabler and conversely, it could also act as a barrier. It is suggested that lack of top management commitment support can occur due to many reasons, such as the lack of experience and training, resistance to change, and unwillingness in adopting an innovation(Heung, 2003; Kshetri, 2008; Thulani et al., 2010). Top managers lack efforts in providing necessary resources for adopting and using EC can be a significant barrier to the establishment of EC (Valmohammadi & Dashti, 2016).

Moreover, literature proposes that lack of awareness regarding the benefits and nature of EC is another significant barrier in the adoption and use of EC in SMEs context (Ihlström, Magnusson, Scupola, & Tuunainen, 2003; Valmohammadi, Valmohammadi, Ghassemi, & Ghassemi, 2016).

Roger's (1983) Diffusion of Innovation (DOI) theory, postulated that one's beliefs such as perceived relative advantage are the elements of the decision behavior to adopt new systems. In SMEs, if the owner/manager perceives that the benefits of using a new system will outweigh the risks and expenditures and consequent impact, then it is more likely to adopt them(Lawrence & Tar, 2010). In addition, many scholars have suggested many customers/suppliers often do not have much awareness of the skills and commitment required for EC (Stockdale & Standing, 2004; Thulani et al., 2010). Thus, the lack of awareness about the nature and benefits of EC adoption reduces the swiftness of EC implementation process. Likewise, optimistic behavior of management towards the adoption and use of IS will account for higher IS/IT acceptance and consequent accomplishment in SMEs (Ghobakhloo & SH, 2011; Kapurubandara & Lawson, 2006). However, we are of the view that for SMEs in developing countries which are not very much aware of potential benefits (either an individual or firm level) of EC (Ghobakhloo, Arias-Aranda, et al., 2011; Sutanonpaiboon & Pearson, 2006) and its effects can be a significant barrier to the adoption EC.

Earlier literature suggests that user's knowledge with information technology is one other organizational feature which plays a crucial part in the adoption and use of IT/IS-based technologies (Caldeira & Ward, 2003; Ghobakhloo, Arias-Aranda, et al., 2011). The overall capacity of firms to evaluate technological opportunities in the areas of its operation relies primarily on human capital and knowledge of the organization (Heung, 2003; Thulani et al., 2010). Similarly, the owner/manager's and employees' IS/IT knowledge and experience equally affect technology adoption process among SMEs (Ihlström et al., 2003; J. Tan et al., 2007). The employee's IT knowledge is crucial for an organization's ability to adopt and make use of EC technologies (Kabanda & Brown, 2015; Rowe, Truex, & Huynh, 2012).

A study investigated by Thong and Yap (1995) confirmed that SMEs with owners/managers who have adequate knowledge about IS/IT are more likely to adopt the system. In addition, some studies within SMEs shown that owners/managers with a higher level of computer proficiency skills tend to be more content with the adoption of IS/IT rather than owners/managers with very little knowledge (Hashim, 2015; Palvia & Palvia, 1999). These opinions are consistent with other empirical studies which stated that adequate knowledge of IS/IT to some extent encourages and supports organization to adopt IT within the SMEs context (Ghobakhloo & SH, 2011; Lybaert, 1998). Likewise, it seems that if employees already have some knowledge on the functions and benefits of EC adoption for their organizations, then the organization may be more willing to adopt such technologies (Molla & Licker, 2005a; Rowe et al., 2012).

As SMEs are encountering significant risks and problems with IT innovation with regard to inadequate knowledge of IT (MacGregor & Vrazalic, 2005), many firms have attempted to delay the adoption of an EC or new technology until they had acquired enough internal expertise (J. Y. L. Thong, 1999). SMEs in developing countries are more limited with regards to IS knowledge in comparison to SMEs in developed countries (J. Tan et al., 2007). Thus, it is anticipated that the lack of IS/IT knowledge among SMEs of developing countries, particularly in Ghana, will adversely influence the adoption of EC.

II. METHODS AND MATERIAL

The information that is used to analyze the second set of hypothesis are similar to those used in the analysis of the first one. In this case also a total of 200 SMEs were sampled randomly across selected sectors in Ghana. The companies were selected based on the accessible population. The industries were selected from the pharmaceutical (1), real estate (2) and fast moving consumer goods sectors (3). The proxy for respondents sampled from the hospitality industry was (4), the woodwork and automobile industries was (5). The second half of the five point likert scale questionnaire contains the information that was used to make this analysis and the contents were derived from previous related studies. The three main constructs were top management support, the HR IT competence and the financial resources. Again the composite value for each firm with regards to technology readiness was compiled and used to analyse the data. The moderator variables were the size of the firm, the industry of the firm and the facilitating conditions. The size of the firm was measured using the number of employees while imdustry was denoted by a proxy value. The facilitating conditions used were adopted from the UTAUT model of technology adoption proposed by Venkatesh et al (2003). Figure 2 shows the structure of the model of hypotheses 2 that was tested. Again, figure 2 shows the model and path of relationship between the independent and the dependent variables in the relationship between organizational factors, e-business value and e-commerce adoption for international business. This model generated nine hypotheses which were tested as follows:

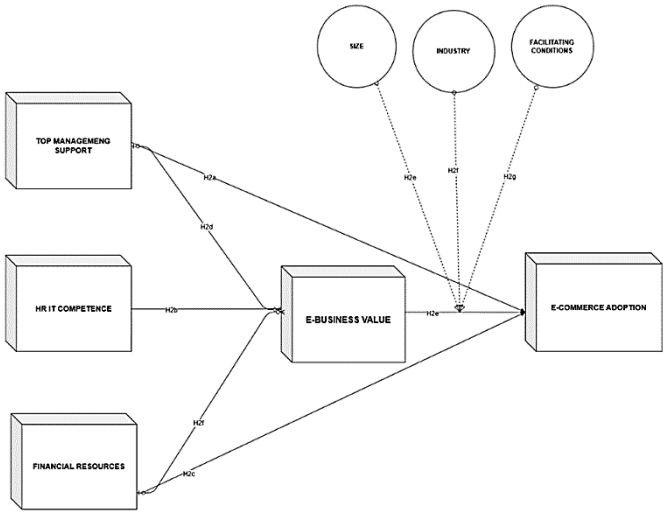
The analytical model uses the structural equation model which is a departure from the traditional form of regression analysis. The structural equation model is explicitly formulated as a causal model, not just a predictive model with column vector, **y**, containing p dependent variables. The vector **y** is understood to represent an arbitrarily chosen observation from the population, maybe the *ith*. In SEM (Structural Equation Model) terms **y** is said to contain the endogenous variables and **x** contains the exogenous variables. An endogenous variable is one that appears at least once as the dependent variable in an equation. On the other hand, variables that do not appear on the left hand side are exogenous, or "given." In other words, all variances of, and covariances between, exogenous variables are determined outside of the system. They are not at issue. The variances and covariances of the endogenous variables are being modeled as a function of the exogenous variables. This is mathematically expressed as follows:

$$\begin{bmatrix} y_1 \\ y_2 \\ \Lambda \\ y_p \end{bmatrix} = \begin{bmatrix} 0 & \beta_{12} & \Lambda & \beta_{1p} \\ \beta_{21} & 0 & \Lambda & \beta_{2p} \\ \Lambda & \Lambda & \Lambda & \Lambda \\ \beta_{p1} & \beta_{p2} & \Lambda & 0 \end{bmatrix} \begin{bmatrix} y_1 \\ y_2 \\ \Lambda \\ y_p \end{bmatrix} + \begin{bmatrix} \gamma_{11} & \gamma_{12} & \Lambda & \gamma_{1q} \\ \gamma_{21} & \gamma_{22} & \Lambda & \gamma_{2q} \\ \Lambda & \Lambda & \Lambda & \Lambda \\ \gamma_{p1} & \gamma_{p2} & \Lambda & \gamma_{pq} \end{bmatrix} \begin{bmatrix} x_1 \\ x_2 \\ \Lambda \\ x_q \end{bmatrix} + \begin{bmatrix} \zeta_1 \\ \zeta_2 \\ \Lambda \\ \zeta_p \end{bmatrix}$$

$$\mathbf{y} = \mathbf{B}\mathbf{y} + \mathbf{\Gamma}\mathbf{x} + \boldsymbol{\zeta}. \quad (1)$$

where for each of the causal parameters, the γ's and the β's, the subscripts follow the same pattern. The first subscript refers to the equation, in other words the y variable which is the effect. The second subscript refers to the cause. The p by p B matrix contains the coefficients of the regressions of y variables on other y variables with 0's on the diagonal which implies that a variable cannot cause itself. The p by q matrix Γ contains the coefficients of the y's on the x's. The error vector, ζ, is p by 1. These errors

are different than factor analysis errors; they represent *errors-in-equations*, in the way that these equations are specified. Thus they are also called *specification errors*. To get to a point to estimate the model, some assumptions were added. For example, it was assumed that E(y) = 0 and E(x) = 0, which has absolutely no impact on the variances or covariances of these variables. We then assume that the x and ζ vectors are independent. Further we employed a second order factor model. In effect, the factors themselves may form a higher order factor. In other words, if the correlations amongst the factors have the right structure, these may be the result of a latent variable. A path diagram of this model appears below:



1) H2a: The top management support for technology in an organization is likely to influence a firms adoption of e-commerce for B2B
2) H2b: The HR IT competence in an organization is likely to influence a firms adoption of e-commerce for B2B
3) H2c: The financial resources of an organization is likely to influence a firms adoption of e-commerce for B2B
4) H2d: The influence of top management suppport on a firm's adoption of e-commerce is mediated by the value it attaches to e-business
5) H2e: The influence of HR IT competence on a firm's adoption of e-commerce is mediated by the value it attaches to e-business
6) H2f: The influence of financial resources on a firm's adoption of e-commerce is mediated by the value it attaches to e-business
7) H2d: The influence of top management suppport on a firm's adoption of e-commerce is moderated by facilitating conditions
8) H2g: The size of the firm moderate the relationship between e-business value and e-commerce adoption
9) H2h: The industry of operation moderate the relationship between e-business value and e-commerce adoption
10) H2i: Facilitating conditions moderate the relationship between e-business value and e-commerce adoption

III. RESULTS AND DISCUSSION

Analysis

Table 1: Descriptive Statistics

	Mean	Std. Deviation	Analysis N
TM Support	3.3125	1.27423	200
TM Support	3.4375	1.35122	200
TM Support	3.3542	1.36038	200
TM Support	3.5417	1.28756	200
TM Support	3.3542	1.22890	200
TM Support	3.2292	1.11545	200
HR IT Comp	3.8750	1.04423	200
HR IT Comp	3.3958	1.33272	200
HR IT Comp	3.3958	1.33272	200
HR IT Comp	3.6042	1.36428	200
HR IT Comp	3.6875	1.30720	200
HR IT Comp	3.6042	1.26726	200
HR IT Comp	3.3333	1.15470	200
Fin Resources	3.3125	1.22312	200
Fin Resources	3.5625	1.21876	200
Fin Resources	3.3750	1.26533	200
Fin Resources	3.4375	1.21876	200
Fin Resources	3.5000	1.30466	200
Fin Resources	3.2083	1.27092	200
Fin Resources	3.2708	1.30040	200
Facilittating Condition	3. 219	1.347	200
Facilittating Condition	3.2917	1.33621	200
Facilittating Condition	3.2292	1.27562	200

Facilittating Condition	3.1875	1.37850	200
Facilittating Condition	3.2083	1.32019	200
Facilittating Condition	3.9583	1.57045	200
Facilittating Condition	3.2708	1.19822	200
Facilittating Condition	3.3333	1.17298	200
Facilittating Condition	3.4375	1.42778	200
Facilittating Condition	3.5625	1.33538	200
E-Value	3.8958	1.43274	200
E-Value	3.2500	1.42172	200
E- Value	3.2500	1.40667	200
Industry	3.3125	1.27423	200
Size	3.4375	1.35122	200
Size	3.3542	1.36038	200
E-Commerce	3.5417	1.28756	200
E-Commerce	3.9583	1.57045	200
E-Commerce	3.2708	1.19822	200

In table 1 the descriptive statistics information about each of the questions administered to the respondents and used for the factor analysis has been presented. The mean and standard deviation of the responses have also been provided. The analysis indicates that most of the responses had a mean response value lower than 3 which indicate an average weak response on the five points Likert scale. However, one of the important information from this table is the amount of data that is analysed. As explained by Abdi & Williams (2010) a desirable data should be above 200. It is even the contention of Bro & Smilde (2014) that generally, over 300 respondents for sampling analysis is probably adequate but there is a universal agreement that factor analysis is inappropriate when the sample size is below 50. Thus the statistical value of the results can be compromised as a result of insufficient data and this may be observed in other test explained in subsequent sections.

Table 2 : KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.829
Bartlett's Test of Sphericity	Approx. Chi-Square	2073.746
	Df	528
	Sig.	.000

The Kaiser-Meyer-Olkin measure of sampling adequacy test results gives a value of .825 as indicated in table 2. Generally, a value in excess of 0.5 is the minimum acceptable value (Kaiser, 1974) while values between 0.7-0.8 are highly acceptable. Kaiser further asserts that values in excess of 0.9 are excellent and an indication that the sample is adequate for further analysis. A high score, however, does not mean that everything about the data is accurate. The second part of the table explains Bartlett's Test of Sphericity which returned a significant value of 0.000. According to Xanthopoulos, et al (2013) the importance of Bartlett's Test of Sphericity is that it gives an indication of the strength of the relationship among the variables. It seeks to test the extent to which the correlation matrix is an identity matrix. An identity matrix is the type of matrix where all the diagonal items have a value of 1 and then all the off-diagonal items very close to 0. The objective is to reject the null hypothesis of an identity matrix. Thus Bartlett's Test of Sphericity value is significant (0.00) and this is less than 0.05 which effectively means that one can reject the null hypothesis. This means that the correlation matrix is not an identity matrix.

Table 3 : Communalities

	Initial	Extraction
TM Support	1	0.739
TM Support	1	0.85
TM Support	1	0.892
TM Support	1	0.909
TM Support	1	0.756
TM Support	1	0.622
HR IT Comp	1	0.69

HR IT Comp	1	0.77
HR IT Comp	1	0.804
HR IT Comp	1	0.764
HR IT Comp	1	0.809
HR IT Comp	1	0.79
HR IT Comp	1	0.804
Fin Resources	1	0.777
Fin Resources	1	0.722
Fin Resources	1	0.688
Fin Resources	1	0.751
Fin Resources	1	0.724
Fin Resources	1	0.82
Fin Resources	1	0.843
Facilittating Condition	1	0.657
Facilittating Condition	1	0.813
Facilittating Condition	1	0.813
Facilittating Condition	1	0.823
Facilittating Condition	1	0.818
Facilittating Condition	1	0.75
Facilittating Condition	1	0.794
Facilittating Condition	1	0.786
Facilittating Condition	1	0.796
Facilittating Condition	1	0.797
E-Value	1	0.915
E-Value	1	0.866
E- Value	1	0.822
Industry	1	0.657
Size	1	0.813
Size	1	0.688
E-Commerce	1	0.751
E-Commerce	1	0.724
E-Commerce	1	0.722
Extraction Method: Principal Component Analysis.		

The commonalities of the variables are also presented in table 3. The table is divided into two parts. The first part has a value of 1 for each of the variables. This is the maximum variance explained by the extraction in the variables. The other section gives the actual extraction variance which is the proportion of variance which can be explained by the variable. The results show that the variances range from .915 to .622. Generally, the benchmark is that the extractions should be higher than 0.05. This implies that all the values as represented in the table currently are high enough and further analysis can be done.

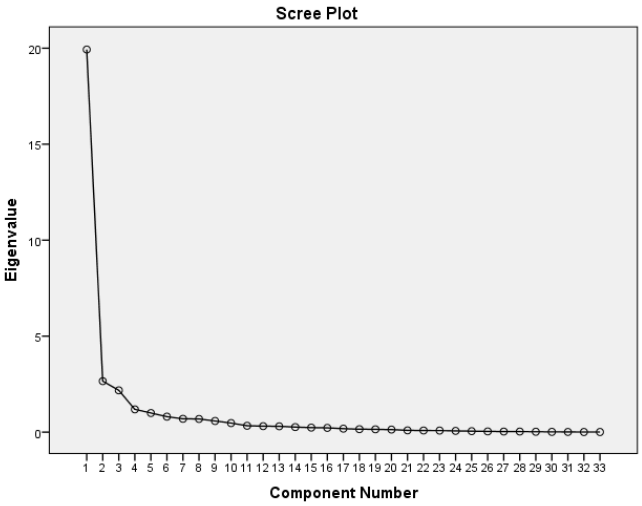
Table 4 : Total Variance Explained

Table 4: Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
TM Support	19.930	60.395	60.395	19.930	60.395	60.395	9.147	27.719	27.719
TM Support	2.657	8.052	68.447	2.657	8.052	68.447	6.800	20.606	48.326
TM Support	2.176	6.594	75.041	2.176	6.594	75.041	5.263	15.949	64.274
TM Support	1.188	3.599	78.640	1.188	3.599	78.640	4.741	14.365	78.640
TM Support	.996	3.019	81.658						
TM Support	.808	2.448	84.106						
HR IT Comp	.695	2.105	86.211						
HR IT Comp	.687	2.082	88.293						
HR IT Comp	.582	1.762	90.055						
HR IT Comp	.472	1.429	91.484						
HR IT Comp	.332	1.005	92.489						
HR IT Comp	.311	.944	93.433						
HR IT Comp	.304	.921	94.354						
Fin Resources	.264	.799	95.153						

Fin Resources	.236	.716	95.869						
Fin Resources	.222	.672	96.541						
Fin Resources	.179	.543	97.084						
Fin Resources	.155	.470	97.554						
Fin Resources	.148	.449	98.002						
Fin Resources	.132	.399	98.401						
Facilittating Condition	.093	.280	98.682						
Facilittating Condition	.086	.262	98.943						
Facilittating Condition	.082	.248	99.191						
Facilittating Condition	.064	.194	99.384						
Facilittating Condition	.051	.154	99.539						
Facilittating Condition	.036	.110	99.648						
Facilittating Condition	.032	.096	99.744						
Facilittating Condition	.029	.088	99.832						
Facilittating Condition	.019	.059	99.891						
Facilittating Condition	.014	.042	99.933						
E-Value	.009	.027	99.960						
E-Value	.008	.023	99.983						
E- Value	.006	.017	100.000						
Industry	.093	.280	98.682						
Size	.086	.262	98.943						
Size	.082	.248	99.191						
E-Commerce	.332	1.005	92.489						
E-Commerce	.311	.944	93.433						
E-Commerce	.304	.921	94.354						
Extraction Method: Principal Component Analysis.									

The total variance explained table has many sections that provide different information. For example, the eigenvalue shows the number of extracted factors that sums up to the total number of items that are subjected to factor analysis. The next section shows the factors which have been extracted from the analysis together with the eigenvalues. The eigenvalue table is divided into three main sections i.e. Initial Eigen Values, Extracted Sums of Squared Loadings and Rotation of Sums of Squared Loadings. The table shows in the extracted sums of squared loadings that four factors have been extracted and they have a cumulative percentage of 78.6%. The first factors account for 60.395% of the variance whereas the second-factor accounts or 68.447%. On the other hand, the third and fourth factors account for 75.041% and 78.640%



The next important issue is the screen plot. This plots the graph of the eigenvalue against all the factors. This graph is very useful to determine the number of factors to retain. The point of interest is the points where the graph begins to flatten. As shown in the total variance explained table, there are four items that are of importance but the curve begins to flatten after factor 3 and 4 onwards. For this only 4 items must be retained.

Table 5 : Component Matrix[a]

	Component			
	1	2	3	4
TM Support	.691	.226	-.458	-.022
TM Support	.744	.190	-.509	-.013
TM Support	.765	.133	-.535	.056
TM Support	.789	.234	-.457	-.153
TM Support	.687	.220	-.480	-.070
TM Support	.739	.087	-.127	-.230
HR IT Comp	.790	-.024	-.105	-.234
HR IT Comp	.847	-.162	.083	.141
HR IT Comp	.863	.001	-.086	-.227
HR IT Comp	.858	.160	-.041	.005
HR IT Comp	.860	.011	-.058	-.258
HR IT Comp	.844	.082	.154	-.218
HR IT Comp	.808	-.360	.144	.016
Fin Resources	.762	-.186	.169	-.366
Fin Resources	.717	-.020	.366	-.271
Fin Resources	.805	-.112	.158	-.044
Fin Resources	.799	.045	.270	-.195
Fin Resources	.694	-.070	.419	-.249
Fin Resources	.877	-.209	.082	-.030
Fin Resources	.861	-.309	-.041	.067
Facilittating Condition	.711	-.372	-.030	.109
Facilittating Condition	.868	-.202	.022	.140
Facilittating Condition	.773	-.336	.144	.285
Facilittating Condition	.832	-.259	-.109	.173
Facilittating Condition	.834	-.313	.018	.157
Facilittating Condition	.577	.506	.333	.224
Facilittating Condition	.844	-.182	.025	.219
Facilittating Condition	.805	-.296	.134	.178
Facilittating Condition	.763	.101	-.122	.435
Facilittating Condition	.854	.238	-.046	.094
E-Value	.688	.605	.225	.160
E-Value	.564	.630	.353	.164
E- Value	.579	.629	.302	.019
Industry	.739	.087	-.127	-.230
Size	.790	-.024	-.105	-.234
Size	.847	-.162	.083	.141
E-Commerce	.863	.001	-.086	-.227
E-Commerce	.858	.160	-.041	.005

E-Commerce

a. 4 components extracted.

The specific loadings extracted under each of the four items of interest are shown in the component matrix in table 5 and this shows all the variables on the factors. It is the contention of Jolliffe (2002) that the higher the absolute value of the loading the more that particular factor contributes to the variable extracted. Typically all items that have factor loadings lower than 0.5 are deemed to be of limited importance and are thereof suppressed in the final analysis. Thus even though all the other initial test indicated that the data was good for the analysis, the principal component

analysis shows that a substantial number of the factors are far lower than 0.05 and have therefore been surprised as highlighted in the table.

Table 6 : Rotated Component Matrix[a]

	Component			
	1	2	3	4
TM Support	0.243	0.785	0.131	0.213
TM Support	0.296	0.843	0.133	0.185
TM Support	0.374	0.848	0.084	0.159
TM Support	0.234	0.855	0.279	0.214
TM Support	0.217	0.806	0.16	0.183
TM Support	0.285	0.534	0.461	0.209
HR IT Comp	0.382	0.511	0.509	0.152
HR IT Comp	0.708	0.3	0.326	0.269
HR IT Comp	0.42	0.54	0.542	0.209
HR IT Comp	0.447	0.514	0.353	0.419
HR IT Comp	0.399	0.522	0.575	0.217
HR IT Comp	0.392	0.359	0.607	0.373
HR IT Comp	0.742	0.192	0.456	0.093
Fin Resources	0.422	0.25	0.726	0.101
Fin Resources	0.368	0.103	0.685	0.327
Fin Resources	0.568	0.257	0.476	0.268
Fin Resources	0.41	0.229	0.617	0.387
Fin Resources	0.4	0.032	0.683	0.311
Fin Resources	0.668	0.326	0.481	0.191
Fin Resources	0.751	0.375	0.363	0.085
Facilittating Condition	0.715	0.267	0.272	-0.001
Facilittating Condition	0.737	0.349	0.318	0.218
Facilittating Condition	0.842	0.145	0.223	0.182
Facilittating Condition	0.749	0.414	0.233	0.114
Facilittating Condition	0.788	0.3	0.301	0.126
Facilittating Condition	0.751	0.328	0.244	0.251
Facilittating Condition	0.784	0.196	0.313	0.186
Facilittating Condition	0.628	0.456	-0.056	0.436
Facilittating Condition	0.443	0.526	0.269	0.501
E-Value	0.19	0.318	0.199	0.859
E-Value	0.114	0.16	0.185	0.891
E- Value	0.045	0.227	0.288	0.828

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.
a. Rotation converged in 7 iterations.

The next issue of importance in the analysis is the rotated component matrix and the information is presented in table 6. According to Zou, et al (2006) the importance of rotation in this context is to reduce the number of factors on which the variables under investigations have high loadings. Generally, the component does not change anything about the matrix but it makes the information presentation and interpretation much easier. From table 6, the analysis shows that BRP16 is substantially loaded on factor component 1 and lowly loaded on factor component 2, 3 and 4. Similarly, the analysis also shows that three factors are also substantially loaded on 2 and not on the others. The factors that are highly loaded on each of the factors are well suited for further analysis

Table 7 : Component Transformation Matrix

Component	1	2	3	4
1	.631	.509	.457	.366
2	-.579	.282	-.122	.756
3	.112	-.802	.382	.446
4	.505	-.136	-.794	.309

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

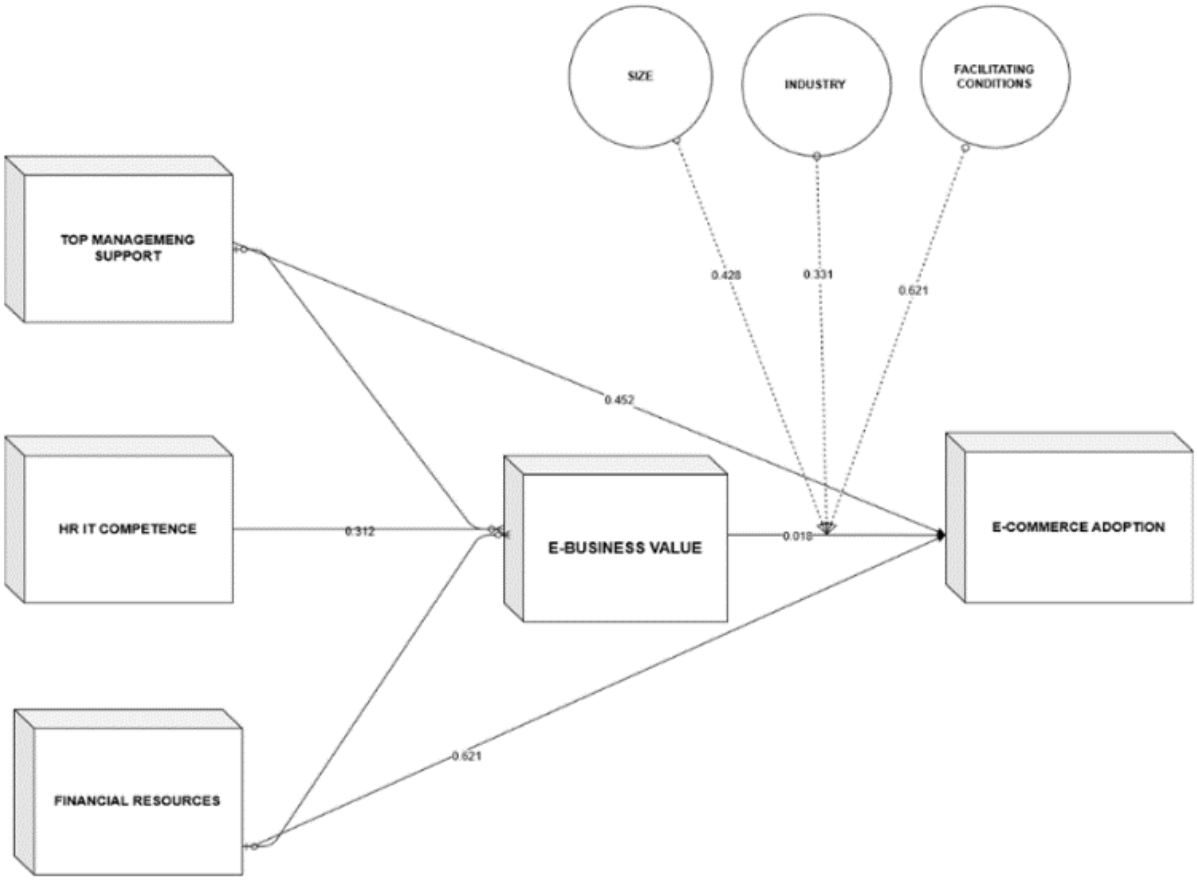


Figure 1: Path Analysis of th Relationship between Organisation Factors and E-commerce Adoption

Table 5. Results of Path Analysis (Organisational and eCommerce Adoption)

Paths	Hypothesis	Path Coefficient	P Values	Status
TM → eCommerce	H1a	0.452	0.011	Acceptable
HR → e-Commerce	H1b	0.312	0.031	Acceptable
FR → eCommerce	H1c	0.621	0.021	Acceptable
TM → eValue → e-Com	H1d	0.772	0.000	Acceptable
HR → eValue → e-Com	H1c	0.632	0.001	Acceptable
FR → eValue → e-Com	H1d	0.581	0.000	Acceptable
eValue → Size → e-Com	H1d	0.428	0.000	Acceptable
eValue → Industry → eCom	H1c	0.331	0.001	Acceptable
eValue → FC → e-Com	H1d	0.471	0.000	Acceptable

The objective of the study was to confirm the extent to which the organization factors as a component of the technology-organisation-environment model proposed by Tonasky is applicable or useful in understanding the challenges of e-commerce adoption by SMEs in Ghana. The first research hypothesis sought to find out whether top management support significantly influences of ecommerce adoption. The results affirm the validity of this claim because the value of 0.452 is statistically significant at 95% confidence interval. With a path coefficient value of 0.312 at a significant value of 0.00, the results further support the validity of the hypothesis that indeed a HR IT Competence

significantly influence adoption of e-commerce. This observation is consistent with earlier findings in the extant literature discussed in respective sections. The same observation is made in respect of whether a firm's financial resources significantly influences the its ecommerce adoption. In that regard, the path coefficient value recorded was 0.621 and is an influential organizational factor in e-commerce adoption. This is also statistically significant at 95% confidence interval. The mediating role of e-business value in the relationship between top management support and e-commerce adoption is investigated in the next set of hypothesis. The path coefficient value of 0.772 indicates that e-business value intervenes in leading top management support to adopt e-commerce. Similar observation is seen in respect of the influence of e-business value in the relationship between HR IT competence and e-commerce adoption. The path coefficient analysis of 0.632 is both positive and statistically significant (p value > 0.05). Regarding hypothesis the influence of e-business value in the relationship between a firm's financial resources and a firm's adoption of e-comerce, a network path coefficient of 0.581 is recorded and the p value of 0.428 shows that the value is statistically significant at 95% confidence interval. The results of the moderating effect the size of the firm on the transfer of ebusiness value to e-commerce adoption is also investigated in this part of the study. The analysis indicates that size of a firm has a role to play in the speed of e-business value conversion to e-commerce adoption. This is evident in the path coefficient value of 0.428 and a significant value of 0.000. The study further confirms the validty of the cliam that the industry of operation moderate the relationship between e-business value and e-commerce adoption. This means that while business organisations may have a stronger sense of appreciation for e-business, the industry in which they operate plays a no mean role in stimulating greater conversion to their eventual e-commerce adoption. This view is supported by the path coefficient path of 0.331and the significant value of 0.001. Finally, hypothesis H1i is also affirmed in this study because the path coefficient value of 0.471is an indication that facilitating conditions moderate the relationship between e-business value and e-commerce adoption.

IV.CONCLUSION

The argument that internal factors in an organization accounts for a substantial portion of e-commerce or technology adoption is well documented in the extant literature that was analysed in earlier section. Howevever the generalizability of the factors within the organization that potentially influences technolog adoption is disputable and this is where the results of this research makes significant inroad and contribution to the stock of available literature. This finding of the study confirms the notion that the cost of technology is likely to influence a firm's adoption of e-commerce for B2B. In like manner, the compatibility of technology is likely to influence a firm's adoption of e-commerce for B2B. On another hand the analysis also further suggest the validity in the claim that the complexity of technology is likely to influence a firm's adoption of e-commerce for B2B. Another issue in contention in the literature review is the extent to which e-business value mediate the relationship between cost of technology, complexity of technology and compatibility of technology and adoption of e-commerce. All of these postulations have been proven to be valid and accepted at 95% confidence interval. This finding is consistent with the extant literature previously highlighted and further supports the postulation that the size of the firm, industry of operation and facilitating conditions moderate the relationship between e-business value and e-commerce adoption.

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