Nepal Journal of Multidisciplinary Research (NJMR)
Vol. 4, No. 1, March 2021. Pages: 107-120
ISSN: 2645-8470 (Print), ISSN: 2705-4691 (Online)
DOI: https://doi.org/10.3126/njmr.v4i1.36623

Strategic Success Factors of Information Technology Outsourcing in Emerging Markets

[1]Sushil Paudel and [2]Vinish Kumar

[1]Mewar University, Rajasthan, India
[2]SANSKAR College of Engineering and Technology, Gaziabad, India

Corresponding Author
Sushil Paudel
Email: sushilpaudel@gmail.com

Received: January 19, 2021; Revised & Accepted: March 26, 2021; Published: April 22, 2021

Abstract

Many businesses are collaborating on joint service initiatives in order to cut operational costs and compete for profits. Outsourcing is a cost-reduction strategy used to carry out tasks by service providers or vendors that are typically handled within the company. This research is focused on outsourcing strategies on vendor's point of view, as many emerging markets continue to struggle to establish a foothold in the international market. The success of IT outsourcing is largely dependent upon the vendor's internal strength, industry-specific environmental factors, and country-specific policies. The respondents were chosen using a snowball sampling technique, and variables were selected from literature review and consulting with industry experts. The survey was conducted within the Kathmandu valley, and quantitative data were collected for the study. Respondents were outsourcing agencies, freelancers, outsourcing consultants and policy makers. The analysis included Structured Equation Modeling and identified six key strategic factors for emerging market: banking priority, growth capacity, intellectual property, country specific specialization, foreign direct investment, and the HR Structure of the vendor. It is suggested that policy makers and IT outsourcing vendors utilize these factors to further strengthen their position in the global outsourcing industry.

Keywords: confirmatory factor analysis, emerging market, exploratory factor analysis, information technology outsourcing, outsourcing strategy

Nepal Journal of Multidisciplinary Research (NJMR)
Vol. 4, No. 1, March 2021. Pages: 107-120
ISSN: 2645-8470 (Print), ISSN: 2705-4691 (Online)
DOI: https://doi.org/10.3126/njmr.v4i1.36623

1. Introduction

In a rapidly changing global environment and an ever-changing market, outsourcing has emerged as a sector of exploration (Asli *et* al, 2014). The idea of collaboration between companies enables companies to concentrate on their core operations and to assign non-critical jobs to other specialized partners. In other words, the usage of logistic services by third-party organizations is seen as outsourcing (Erturgut, 2012).

The outsourcing of information technology is an unavoidable part of modern enterprises (Bapna *et* al., 2010) which is growing at an average rate of 4.4% from 2010 to 2015 (Gartner, 2020). Studies show that the performance of the Information Technology Outsourcing (ITO) is dependent on characteristics such as contracting, the degree of confidence between the parties and the nature of relationships, engagement, competence, information sharing and the extent of outsourcing (Lee *et* al. 2004; Grover *et* al., 1996).

ICT is one of the fastest growing sectors in Nepal, including the Internet, telephone, mobile, ITeS and business process outsourcing (BPO). IT Enabled Services and BPOs are one of the five targets for export potential services selected by the government of Nepal (Investment Board Nepal, 2017). ICT service exports from Nepal was reported at 28,76,93,389 USD in 2017 (Trading Economics BoP, 2020) which is 18.04 % (Trading Economics Percentage, 2020) of the total export according to the World Bank collection of development indicators. This sector has a major role in driving socio-economic growth, as it contributes to each and every sector and generates a wide variety of jobs (MOCIT, 2019). There are three types of businesses involved in Nepal in the ITES-BPO industry: domestic solution providers; export-oriented suppliers including offshore stations, and hybrid (local plus export-oriented) suppliers. Call centers, medical transcription services, geographical information systems, data mining services, animation services and back-office data processing firms are the few categories of IT companies working in the outsourcing sector (Investment Board Nepal, 2017). Nepal offers distinct advantages for BPOs due to the lower operating expenses and minimal staff turnover (MOCIT, 2019).

IT outsourcing, beginning with small projects, directly contributes to the establishment of larger industries, which in turn supports the economic development of developing nations. Nepal has not been able to harness its growth potential on the borders of two of the world's fastest-growing economies, India and China, due to prolonged political instability and inefficiency. Not only Nepal, several emerging countries from Asia, Africa and South America are also struggling to mark their presence in the global outsourcing landscape. We began our research with the goal of assisting policymakers, business community, and information technology researchers with outsourcing methods, strategic tools, and literature.

Nepal Journal of Multidisciplinary Research (NJMR)
Vol. 4, No. 1, March 2021. Pages: 107-120
ISSN: 2645-8470 (Print), ISSN: 2705-4691 (Online)
DOI: https://doi.org/10.3126/njmr.v4i1.36623

There were three research questions for the study. Q1: What are the critical success factors of information technology outsourcing on a vendor's perspective? Q2: What are the strategies to promote IT outsourcing services in the emerging countries? Q3. What would be the appropriate ITO Success Model for IT outsourcing vendors? This paper is presented based on Q2 with an objective to identify the strategic success factors of information technology outsourcing for an emerging market, especially Nepal, as a global vendor.

2. Research Methodology

This study is exploratory in nature and utilizes quantitative data. The statistical population included IT outsourcing companies, freelancers, outsourcing experts, and government officials. The sample size was 385 and a questionnaire was used as a research instrument. The strategic factors used in this study were extracted from the literature review and refined as per the input from industry experts. Questionnaire was designed in 5-point Likert Scale starting from 5 (Strongly Agree), 4 (Agree), 3 (Neutral), 2 (Disagree) and 1 (Strongly Disagree). The questionnaire contained 31 variables selected to analyze the strategic factors, out of which 9 were internal, 7 were external and 15 were policy factors. 'Internal Factors' contains the variables related to the organization of the service provider, 'External Factors' refers to the environmental factors associated with outsourcing industry and 'Policy Factors' refers to the variables related with the government and the policy makers.

2.1 Data Collection

The present study was carried out in 3 districts inside Kathmandu valley, the capital city of Nepal, namely Bhaktapur, Kathmandu and Lalitpur. In Nepal, companies are registered in the Office of the Company Registrar under Ministry of Commerce and Industry. IT companies are classified in the categories as per the international industrial code eg. software development and consultancy (industrial code:7220), database activities and distribution of electronic content (7240), hardware repair and maintenance (7250), data processing (7230), hardware consultancy (7210) and other IT activities (7290). However, there is no distinct industrial code for IT Outsourcing, which complicated identifying the actual population. As per Investment Board Nepal, there are over 6,000 BPO businesses, of which only 256 are legally registered in Nepal by 2017. We used snowball sampling method and reached to new respondents on recommendation of previous one. We also used the individual contacts and web searches to identify respondents.

The questionnaire was validated by 10 industry experts and statisticians using face and content validity. Pilot study was carried out before the actual study and ethical standards were considered. Structured questionnaire was designed in both English and Nepal languages. The survey forms were distributed by the researcher personally, by using enumerator and by email. Out of 590 questionnaires distributed, 403 questions were collected and upon removing missing and unusual records, 385 respondents were selected.

Nepal Journal of Multidisciplinary Research (NJMR)
Vol. 4, No. 1, March 2021. Pages: 107-120
ISSN: 2645-8470 (Print), ISSN: 2705-4691 (Online)
DOI: https://doi.org/10.3126/njmr.v4i1.36623

2.2 Data Validation

The data collected from respondents were checked for reliability. The software used for analysis is IBM SPSS version 26. Reliability coefficient, Cronbach α was used for checking the reliability of the data. Alpha is the average of the correlation coefficient of each item with every other item. Aggregate Cronbach α was found to be 0.909 and coefficient of each latent variables was ranged from 0.688 to 0.894 (Table 1). Since the reliability coefficient of all the latent variables are above 0.6, this indicates that the research instrument is reliable for further analysis.

Table 1: Result of Reliability, Adequacy and Sphericity Test

Category/Latent Variable	Reliability Statistics		
	Cronbach's Alpha	Alpha Based on Standardized Items	N
Internal Strategic Factors	.688	.715	9
External Strategic Factors	.832	.836	7
Policy Factors	.894	.896	15

The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy and Bartlett's test of sphericity was conducted for each latent variable. The latent variables have KMO values between .678 and .804 which is considered strong (>.6) for further study, and this demonstrates the feasibility of using factor analysis to examine the underlying attributes (Table 2). The Bartlett's test of sphericity was highly significant (p=000), which rejects the null hypothesis and shows that the described attributes are correlated within the population.

Table 2: Result of Adequacy and Sphericity Test

Latent Variables	KMO Measure of Sampling Adequacy	Bartlett's Test of Sphericity		
		Approx. Chi-Square	df	Sig
Internal Strategic Factors	.678	786.109	36	.000
External Strategic Factors	.804	1041.989	21	.000
Policy Factors	.784	3104.846	105	.000

3. Data Analysis

The study has analyzed the primary data to identify the variables of strategic factors of IT outsourcing. It has used the factor analysis for the selection of indicators and has run Exploratory Factor Analysis (EFA) and Confirmatory Factor Analysis (CFA) to develop the model. In a research survey, when the number of variables is many, most of them may be correlated and factor analysis reduces factors to a manageable level for interpretation.

The data are presented under the following sub-headings:

Nepal Journal of Multidisciplinary Research (NJMR)
Vol. 4, No. 1, March 2021. Pages: 107-120
ISSN: 2645-8470 (Print), ISSN: 2705-4691 (Online)
DOI: https://doi.org/10.3126/njmr.v4i1.36623

3.1 Exploratory Factor Analysis

The data was initially analyzed using exploratory factor analysis which is a procedure generally used for data reduction and summarization. Principal Component Analysis initially extracted 29 Variables out of 31 in 9 groups using Varimax Rotation (Table 3).

Table 3: Rotated Component Matrix

	Component								
	1	2	3	4	5	6	7	8	9
Own Intellectual Property			.824						
Increase Efficiency						.806			
Minimize production costs							.759		
HR Structure of the company			.634						
Build a strong sales team								.836	
IT Infrastructure								.631	
Product Expertise									
Capacity to Grow			.798						
Meet the Compliance			.582			.548			
Competitive marketplace		.737							
Global Image of the Country		.605							
Possibility of market penetration		.701							
Demographic Information and Trends		.520	.557						
Market Demand		.822							
Price sensitivity							.797		
Competition's Staying Power		.549							
Government Policies and Preferences	.809								
Adjustment of Taxes and Tariffs	.828								
More IT Colleges	.576								
FDI on IT Outsourcing	.589								
Training Centers as per Global Demand	.570								
Formulate Government Agency to Promote IT Outsourcing	.523								
Interaction program between IT outsourcing companies				.689					
Knowledge sharing activities between the countries				.814					
Cooperation and Collaboration									

Nepal Journal of Multidisciplinary Research (NJMR)
Vol. 4, No. 1, March 2021. Pages: 107-120
ISSN: 2645-8470 (Print), ISSN: 2705-4691 (Online)
DOI: https://doi.org/10.3126/njmr.v4i1.36623

with foreign companies									
Banking Priority to Outsourcing Sector	.667								
Country Specific Specialization				.576					
Recognition of Outsourcing Companies				.594					
Pool of IT Experts	.588								
Develop an Outsourcing Zone					.791				
Minimize Brain Drain									.784
Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.									
a. Rotation converged in 14 iterations.									

Variables with less than 0.5 factor loading, negative factor loadings and cross loadings were removed. As CFA utilizes maximum likelihood to extract variables, final extraction was further refined using Maximum Likelihood and Varimax Rotation that decreased the groups into 2. Internal factors had 5 observed variables while External and Policy Factors are merged in a single latent variable 'external factors' with 15 observed variables, as given in table 4.

Table 4: Rotated Factor Matrix reduced latent variables to 2

	Factor	
	External Factors	Internal Factors
Own Intellectual Property		.730
HR Structure of the company		.600
Product Expertise		.449
Capacity to Grow		.774
Meet the Compliance		.562
Competitive marketplace	.639	
Possibility of market penetration	.460	
Government Policies and Preferences	.691	
Adjustment of Taxes and Tariffs	.604	
More IT Colleges	.617	
FDI on IT Outsourcing	.745	
Training Centers as per Global Demand	.622	
Formulate Government Agency to Promote IT Outsourcing	.725	
Interaction program between IT outsourcing companies	.636	
Knowledge sharing activities between the countries	.394	

Nepal Journal of Multidisciplinary Research (NJMR)
Vol. 4, No. 1, March 2021. Pages: 107-120
ISSN: 2645-8470 (Print), ISSN: 2705-4691 (Online)
DOI: https://doi.org/10.3126/njmr.v4i1.36623

Cooperation and Collaboration with foreign companies	.575	
Banking Priority to Outsourcing Sector	.815	
Country Specific Specialization	.724	
Recognition of Outsourcing Companies	.441	
Pool of IT Experts	.487	
Extraction Method: Maximum Likelihood. Rotation Method: Varimax with Kaiser Normalization.		
a. Rotation converged in 3 iterations.		

3.2 Structural Equation Modeling

From a conceptual standpoint, Structural Equation Modeling (SEM) analysis typically follows a positivist epistemological belief. In this vein, SEM arises from the fusion of two traditions. On the one hand, a psychometric approach (linear regression models), on the other - factor analysis. SEM thus incorporates the use of latent (unobserved variables) describing theoretical principles and measure data (indicators or manifest variables used as inputs) for statistical analysis providing proof of the relationships between latent variables. SEM is especially useful in IS research, where many, if not most, main concepts cannot be directly observed. Indeed, in recent years, a significant part of IS research has mainly used SEM as an empirical methodology for theory testing (Roldán & Sánchez-Franco, 2012).

To further refine the factors, the variables collected from EFA were plotted in CFA using IBM SPSS AMOS 26. When the model was plotted and executed, there were 230 distinct sample moments, 61 parameters to be estimated and 169 Degrees of Freedom. Chi-square value was 2161.539 and Probability level of 0.000 (Fig. 1).

Nepal Journal of Multidisciplinary Research (NJMR)
Vol. 4, No. 1, March 2021. Pages: 107-120
ISSN: 2645-8470 (Print), ISSN: 2705-4691 (Online)
DOI: https://doi.org/10.3126/njmr.v4i1.36623

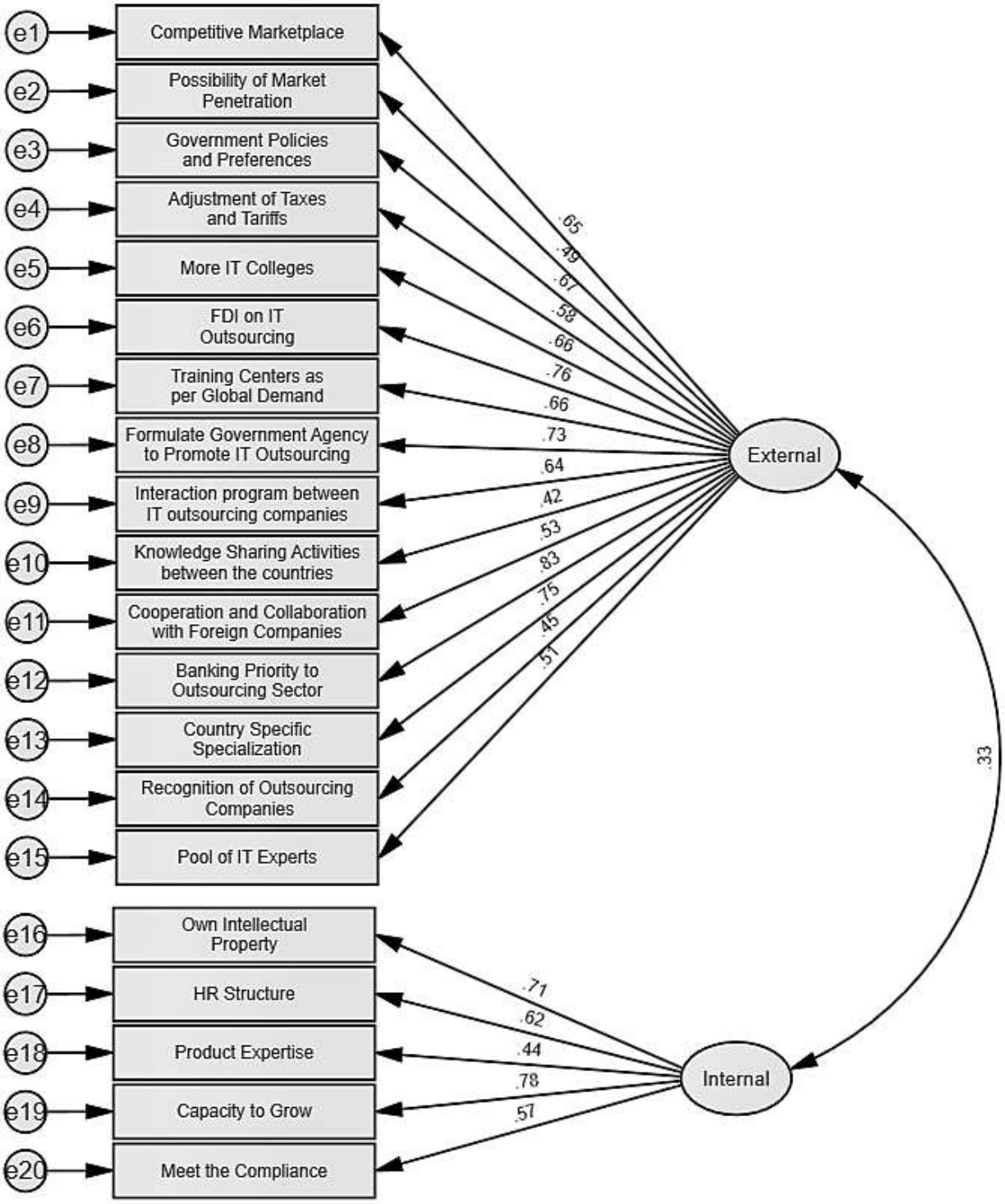

Fig 1: Structural Equation Modeling for Strategic Factors

Observed variables with lower factor loadings were removed until the model fit was achieved. Covariance analysis was based on maximum likelihood with unbiased covariances supplied as input. The output computed were standardized estimates, squared multiple correlations, sample moments, factor score weights, covariances and correlations. The

Nepal Journal of Multidisciplinary Research (NJMR)
Vol. 4, No. 1, March 2021. Pages: 107-120
ISSN: 2645-8470 (Print), ISSN: 2705-4691 (Online)
DOI: https://doi.org/10.3126/njmr.v4i1.36623

resulting model has Chi-square value of 17.865, degrees of freedom 6 and probability level of 0.007 and this was achieved by using the modification indices. As shown in figure 2, error levels e12 and e16 are correlated and error levels e13 and e19 are correlated. Also, the variables HR Structure and FDI has factor coefficients less than 0.7 but these variables were selected due to their correlations with other observed variables for best model fit.

4. Findings

Total six variables were identified as strategic success factors with model fit, 1. Banking Priority to IT Outsourcing Industry 2. Country Specific Specialization 3. Foreign Direct Investment on Information Technology 4. Vendor's Capacity to Grow 5. Own Intellectual Property and 6. Vendor's HR structure. Figure 6 shows the model achieved from CFA.

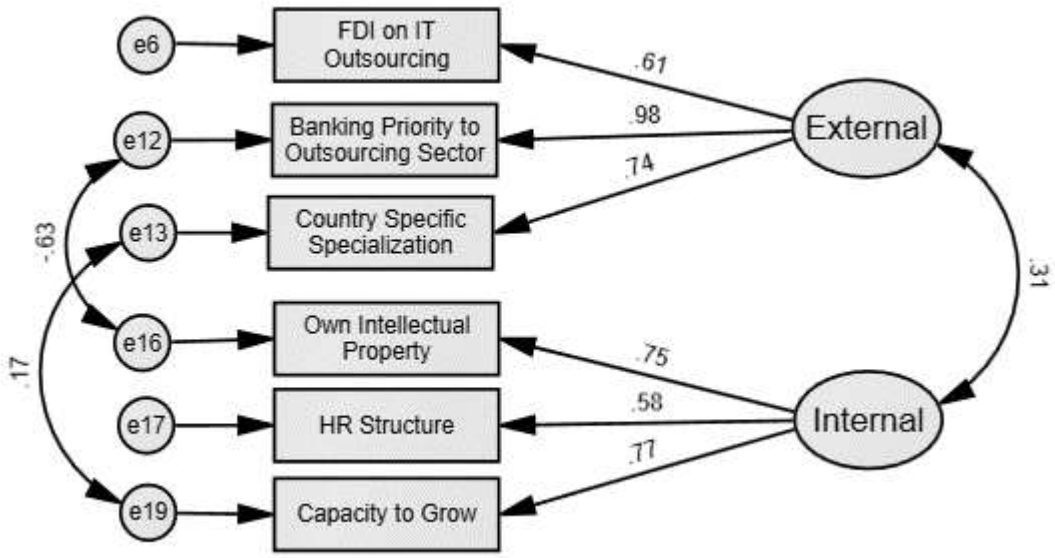

Figure 2: Structural Equation Modeling for Strategic Factors on Model Fit

The regression weight on table 5 shows that the estimates are less than 1 and each variable are significant to respective latent factors.

Table 5: Regression Weight and the significance level

			Estimate	S.E.	C.R.	P	Label
FDI on IT Outsourcing	<---	ExternalFactors	.701	.062	11.282	***	par_1
Banking Priority to Outsourcing Sector	<---	ExternalFactors	1.000				
Country Specific Specialization	<---	ExternalFactors	.788	.060	13.241	***	par_2
Own Intellectual Property	<---	InternalFactors	.696	.071	9.847	***	par_3
HR Structure	<---	InternalFactors	.828	.088	9.407	***	par_4
Capacity to Grow	<---	InternalFactors	1.000				

Nepal Journal of Multidisciplinary Research (NJMR)
Vol. 4, No. 1, March 2021. Pages: 107-120
ISSN: 2645-8470 (Print), ISSN: 2705-4691 (Online)
DOI: https://doi.org/10.3126/njmr.v4i1.36623

Model Fit measures were evaluated, and the result is satisfactory. CMIN/DF has value of 2.978, CFI is 0.985, SRMR is 0.047, RMSEA is 0.072 and PClose 0.148. Table 6 shows the interpretation of each measurement scales.

Table 6: Model Fit Indices

Measure	Estimate	Threshold (Gaskin & Lim, 2016)	Interpretation
CMIN (Chi-square statistics)	17.865	--	--
DF (Degrees of Freedom)	6.000	--	--
CMIN/DF	2.978	Between 1 and 3	Excellent
CFI (Comparative Fit Index)	0.985	>0.95	Excellent
SRMR (Standardized Root Mean Residual)	0.047	<0.08	Excellent
RMSEA (Root Mean Square Error of Approximation)	0.072	<0.06	Acceptable
PClose (p value when RMSEA is > 0)	0.148	>0.05	Excellent

Similarly, the value of NFI (Normed Fit Index) is .977, RFI (Relative Fix Index) is .943, IFI (Incremental Fit Index) is .985, TLI (Tucker Lewis Index) .962 and the chi-square is not significant, thus the model is regarded as acceptable.

4.1 Validity Test

The values of CR, AVE, MSV and MarR(H) shows that the model is valid. AVE of the InternalFactors is 0.497 which is very near to the threshold of 0.5; value of CR, MSV and MaxR(H) are within the threshold and hence, the resulting model is valid (Table 7).

Table 7: Model Fit Measures

Latent Variables	CR* (>0.7)	AVE* (>0.5>	MSV* (<AVE)	MaxR(H)* (>0.7)	External Factors	Internal Factors
External Factors	0.829	0.627	0.097	0.962	0.792	
Internal Factors	0.745	0.497	0.097	0.765	0.312***	0.705

*** $p < 0.001$

*CR (Composite Reliability), AVE (Average Variance Extracted is used to test Convergent Validity), MSV (Maximum Shared Variance is used to test Discriminant Validity), MaxR(H): Maximal Reliability

4.2 Correlation and Regression Analysis

Data of each factors were further imputed and tested the Pearson Correlation and the result shows that the correlation is significant at the 0.01 level.

Nepal Journal of Multidisciplinary Research (NJMR)
Vol. 4, No. 1, March 2021. Pages: 107-120
ISSN: 2645-8470 (Print), ISSN: 2705-4691 (Online)
DOI: https://doi.org/10.3126/njmr.v4i1.36623

Table 7: Correlation between the internal and external strategic factors

Correlations			
		External Factors	Internal Factors
External Factors	Pearson Correlation	1	.388**
	Sig. (2-tailed)		.000
	N	385	385
Internal Factors	Pearson Correlation	.388**	1
	Sig. (2-tailed)	.000	
	N	385	385
**. Correlation is significant at the 0.01 level (2-tailed).			

Multivariate Regression Analysis show that value of R, which represents simple correlation, is .388 (Table 8). R-square indicates how much of the total variance in the dependent variable 'external factors' can be explained by independent variable. The R Square is .15 which indicates that the independent variables explain 15.0% of the variation in the dependent variable. The adjusted R Square value is .148 which means that the internal factors contributed by 14.8% in external factors of strategic factors. Falk & Miller (1992) proposed that the R2 values should be equal to or greater than 0.10 so that a certain endogenous building variance is considered acceptable.

Table 8: Model Validation: Value of R, R Square and Durbin-Watson

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.388[a]	.150	.148	.48485	2.134
a. Predictors: (Constant), Internal Factors					
b. Dependent Variable: External Factors					

Multicollinearity occurs when two or more predictors in the model are correlated and provide redundant information about the response. Multicollinearity is measured by variance inflation factors (VIF) and tolerance. If VIF value exceeds 4.0, or by tolerance less than 0.2 then there is a problem with multicollinearity (Hair *et* al., 2010). In table 9, the tolerance and VIF value is 1.000 and this shows that the model is in good shape.

Table 9: Test of Collinearity

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant	9.489E	.025		.000	1.000		

Nepal Journal of Multidisciplinary Research (NJMR)
Vol. 4, No. 1, March 2021. Pages: 107-120
ISSN: 2645-8470 (Print), ISSN: 2705-4691 (Online)
DOI: https://doi.org/10.3126/njmr.v4i1.36623

	)	-17						
	Internal Factors	.651	.079	.388	8.229	.000	1.000	1.000
a. Dependent Variable: External Factors								

5. Discussion and Conclusion

a. Finance is the catalyst that helps shape new enterprises, allowing businesses to take advantage of opportunities to expand, generate more employment, and in turn fund other businesses. Strategic use of financial instruments, such as loans and investments, is key to success of IT Outsourcing Business. High interest rates, low value, inefficient and depleted banking, restrictive policies from central bank are toxic in emerging economies and IT Outsourcing needs special banking priority.

b. An IT outsourcing provider should have capacity to grow to next level as per the demand. Growth capacity includes financial capacity, production capacity, distribution capacity, HR capacity etc.

c. Own propriety software or solution, referred as Intellectual Property in IT sector, is vital to entrepreneurship. The more Intellectual Property a company has, the faster it grows.

d. The world looks to China to manufacture hardware and India to build software. Country specific specialization allows emerging nations to attract more customers.

e. According to UNCTAD, FDI's growth in Asia was $474 billion in 2019, although the region remained a major FDI destination with over 30% of global FDI flows. Chinese inflows rose slightly to an all-time high of $141 billion. India's FDI has risen to $51 billion by 20 percent, helping the country's upward FDI trend. Emerging countries have also increased FDI, but the value is relatively low, as, for instance, FDI in Nepal recovered from a three-year low of $67 million in 2018 to $185 million in 2019. The bulk of investments have been made in the ICT sectors both in China and India (UNCTAD, 2020). Foreign Direct Investment helps to share the knowledge, transfer latest technologies, and cultivate innovative ideas and hence, should be considered as a strategy for shaping IT outsourcing into the next level.

f. The center of the IT industry is the highly qualified human resource. Qualified and efficient workforce plays an important part in maintaining a strong relationship with customers. In addition, employee relationships with staff play a significant role in the performance of the outsourcing project. Therefore, human resources and their structure should be given a top priority.

g. This paper has a significant contribution to identify the strategic success factors of IT Outsourcing on the viewpoint of the vendor. This paper provides insight to the policy makers to adopt new strategies to mark their footprint in the global outsourcing market. However, implementation is a complex task that requires time and commitment; but the payoffs can be enormous. Similarly, this study will help researchers to expand their knowledge and use the variables in the future study.

References

Asli, A., Eric, S., & Nursel, O. (2014). Dynamic Strategic Supplier Selection System with Fuzzy Logic. *Social and Behavioral Sciences (2nd World Conference on Business, Economics and Management - WCBEM 2013)*, 109, 1059-1063. https://doi.org/10.1016/j.sbspro.2013.12.588

Bapna, R., Barua, A., Mani, D., & Mehra, A. (2010). Cooperation, Coordination and Governance in Multisourcing: An Agenda for Analytical and Empirical Research. *Information Systems*, 21(4), 785-795. https://doi.org/10.1287/isre.1100.0328

Erturgut, R. (2012). The Future of Supply Chain and Logistics Management in the Strategic Organizations: Contractor Companies and New Generation Suppliers. *Social and Behavioral Sciences*, 46, 4221-4225. https://doi.org/10.1016/j.sbspro.2012.06.230

Falk, R. F., & Miller, N. B. (1992). A primer for soft modeling. University of Akron Press. Print.

Gartner. (2020). Retrieved from http://www.gartner.com/DisplayDocument?id=1881228&ref='g_fromdoc'

Gaskin, J., & Lim, J. (2016). Model Fit Measures. *AMOS Plugin*. Retrieved from Gaskination's StatWiki.

Grover, V., Cheon, M. J., & Teng, J. T. (1996). The Effect of Service Quality and Partnership on the Outsourcing of Information Systems Functions. *Journal of Management Information Systems*. 12 (4), 89-116. https://doi.org/10.1080/07421222.1996.11518102

Hair, Joseph F., et al. Multivariate Data Analysis: A Global Perspective. 7th ed. Upper Saddle River: Prentice Hall, 2009. Print.

Investment Board Nepal (2017). ICT Sector Profile. Retrieved from https://ibn.gov.np/wp-content/uploads/2020/04/ICT-Sector-Profile.pdf.

Lee, J. N., Miranda, S. M., & Kim, Y. M. (2004). IT Outsourcing Strategies: Universalistic, Contingency, and Configurational Explanations of Success. *Information Systems Research.* 15(2), 109-213. https://doi.org/10.1287/isre.1040.0013

MOCIT (2019). 2019 Digital Nepal Framework: Unlocking Nepal's Growth Potential. Kathmandu: Frost and Sullivan.

Roldán, J., & Sánchez-Franco, M.J. (2012). Variance-Based Structural Equation Modeling: Guidelines for Using Partial Least Squares in Information Systems Research. (M. Mora, O. Gelman, A. Steenkamp, & M. Raisinghani, Eds.) Research Methodologies, Innovations and Philosophies in Software Systems Engineering and Information Systems, 193-221. https://doi.org/10.4018/978-1-4666-0179-6.ch010

Trading Economics BoP (2020). Nepal - ICT Service Exports (BoP, Current US$). Retrieved from https://tradingeconomics.com/nepal/ict-service-exports-bop-current-us$-wb-data.html

Trading Economics Percentage (2020). Nepal - ICT Service Exports (% Of Service Exports, BoP). Retrieved from https://tradingeconomics.com/nepal/ict-service-exports-percent-of-service-exports-bop-wb-data.html

UNCTAD (2020). World Investment Report 2020. New York: United Nations Publications.