The Mediating Effect of Generic Strategies on Performance of Higher Education Institutions in Zambia

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ABSTRACT: Higher Education Institutions have joined the corporate world in adopting strategies in order to enhance their performance. This study sought to explore the mediating effect of Porter's generic strategies on the relationship between internal resources and university performance in Zambia. The target population was 499 students from 4 universities. Data was collected via self-administered questionnaires. The study used SPSS version 27 and PROCESS macro version 4.2 to analyze data. The results indicate that differentiation strategy has both a direct and an indirect effect on university performance, while focus strategy has a limited indirect effect on university performance. The study also reveals that cost leadership has no effect direct or indirect on university performance. The implications of the study are that universities should embrace differentiation and focus strategies in their planning to enhance their performance

KEYWORDS: Higher Education Institutions, University Performance Differentiation Focus Cost-Leadership Strategy

1. INTRODUCTION

Porter developed three generic strategies that firms can adopt for competitive advantage (Porter & Canada, 1985). The strategies are cost leadership, differentiation and focus. In order to be competitive, firms will adopt any one of these strategies or a combination of these strategies. Cost leadership is the ability to keep production costs low and thereby have a price advantage and create competitiveness (Bal & Erkan, 2019). Differentiation is the ability to offer a unique product, whereas the focus strategy is the ability to concentrate on customer groups with specific needs, hence narrow target audience (Bal & Erkan, 2019). The internal and external environmental forces have a significant influence on the choice of strategies adopted. For HEIs to achieve sustainable competitive advantage, they must adopt strategies that align with their internal and external environmental landscapes. The adoption of these generic strategies by many institutions, including higher education institutions has seen an upward trend (Alzoubi & Emeagwali, 2016). Porter, (2008), states that competitive advantage is the firm's ability to create superior value for its buyers by offering lower prices than competitors for equivalent service offer or by providing unique services that a buyer is willing to pay at a premium price. Sigalas and Pekka- Economou define competitive advantage as "the above industry average manifested exploitation of market opportunities and neutralization of competitive threats" (Sigalas & Pekka-economou, 2018). Furthermore, the concept of competitive advantage has broadened to include other aspects, such as, services, value creation as well as overall firm performance (Haan, 2015; Abdurachman et al., 2023). Competitive advantage is achieved when firms leverage their internal resources, taking into account external environmental forces, to adopt appropriate strategies. The aim of this study is to explore the mediating effect of generic strategies on university performance.

Research Questions

RQ1 what is the influence of internal resources on strategy types?

RQ2 what is the influence of strategy type on university performance?

RQ3 what is the mediating effect of strategy type on the relationship between internal resources and university performance?

2. LITERATURE REVIEW

2.1 Internal Resources

Internal environmental forces of organisations refer to factors within an organisations that have an influence on its operations, positively or negatively. This paper examines internal resources, viewed from the lenses of the Resource Based View (RBV) Theory

(Barnel, 1991). These internal resources have been classified as, institutional reputation, technological capabilities, administrative processes, human resources, culture, institutional reputation, brand image, rankings, marketing activities and financial resources, to mention only a few (Wang et al., 2020; Mainardes et al., 2011). The nature of each of the forces plays a very important role in determining the choice of strategy an institution will pursue.

The quality of staff: human resources are an important asset to an organization. A university that has highly skilled academicians and administrators can enhance its performance by differentiating itself. A university can offer high quality education in specialized fields, offer uniquely designed study programmes and flexible modes of learning (Jeketule, 2018). Conversely, a university may choose to pursue cost leadership strategy by offering standardized programs and increasing class sizes. It may also employ cost-cutting measures such as online administrative processes and employing part time academic staff where necessary.

Availability of financial resources: financial resources have a significant impact on the strategic choices of an institution. A university, that has sufficient financial resources, can afford to adopt differentiation strategies. It can invest in state of the art technology, lecture theaters and other campus facilities, which can in turn enhance institutional reputation (Soko, 2014). Institutions that are well funded are likely to be more flexible and diverse in their programme offerings.

Technological capabilities: in this era of digital transformation, HEIs need to leverage technology to differentiate themselves. They can employ innovative teaching methods, making use of online platforms for teaching, and administrative processes (Ngaruko, 2014)**.** HEIs can adopt differentiation strategies to distinguish themselves from their competitors. Alternatively, HEIs can adopt cost leadership strategies using technology to enhance operational efficiency. Barney (1991; 2001) asserts that as long as a firm has internal resources that are valuable, rare, inimitable and non-substitutable (VRIN), they should be able to achieve competitive advantage.

A university can adopt strategies depending on the configuration of its internal resources.

H₁: internal resources have an influence on university performance

H₂: internal resources have an influence on the strategy types adopted

2.2 Cost leadership strategy

According to Porter (1985), cost leadership involves setting out to be the lowest cost producer in an industry. Cost advantages may vary from industry to industry, however, they may include; access to raw materials, economies of scale, further along the experience curve. A cost leadership strategy would be more effective in stable environments (Pulaj et al., 2015; Manyeki et al., 2019). Low cost strategy puts an emphasis on producing standardized products at a very low cost. According to (Tanwar, 2013), the foremost strategic objective of a low cost provider is to lower cost than rival firms. However, low cost strategy should not be considered as offering products that are inferior to competitors, but products with comparable quality (Islami et al., 2020). A firm pursuing low cost strategy has two alternative pathways (Porter, 1985). Firms may pursue low cost strategy because it may enable firms to sell their products at a lower price and still be able to earn profits. Low cost strategy may also act as a barrier for new entrants into the industry.

However, low cost strategy may not provide a permanent competitive advantage. If the strategy can be relatively easy or less costly to imitate by competitors, then the strategy will not last long, or the competitive edge will not last long (David & David, 2017). To be successful in using this strategy, firms, must therefore, (i) perform value chain activities more efficiently than rivals firms and (ii) revamp the overall value chain in order to eliminate some costly activities (David & David, 2017).

HEIs have adopted cost leadership, especially due to financial constraints. They have done so by minimizing operational costs and streamlining administrative processes (Porter, 2008; Okwemba, 2023). These strategies have enabled HEIs to attract students who are cost conscious.

H₃: Cost leadership has a significant mediating effect on the relationship between internal resources and university performance

2.3 Differentiation strategy

Porter (1985) suggests that this strategy is unique in ways that are valued by a customer. There are several differentiation attributes a firm can use and they include; product characteristics, product marketing, delivery system. Differentiation is a strategy that a firm can use to distinguish itself from competitors through the quality of its products or services (Griffin, 2015). According to Porter (1985), if a product is unique, then it may offer high customer loyalty. If customers perceive the product to be unique, they will be loyal to the firm and willing to pay to pay a higher price for the product. Successful differentiation allows firms to charge higher prices for its products. (David & David, 2017) argue that firms that pursue differentiation can hold on to their competitive advantage for as long as differentiation attributes are difficult to copy by rivals.

According to Pulaj et al., (2015), firms can enhance differentiation if they (i) create product features that appeal to a wide range of customers, (ii) improve customer service, (iii) invest in R&D activities (iv) pursue continuous quality improvement, (v) increase marketing and brand-building activities, and (vi) emphasize human resource activities that improve skills and expertise of

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personnel. HEIs have adopted differentiation strategies by designing unique academic programmes, student support services, research initiatives and campus facilities (Okwemba, 2023).

H₄: Differentiation strategy has a significant mediating effect on the relationship between internal resources and university performance

2.4 Focus strategy

Porter (1985) proposed a third strategy which is the focus strategy, which can be implemented by the firm. Using focus strategy, a firm will concentrate on a specific regional market, product line or buyers. The rationale of the focus strategy is to serve a specific segment of the market (Porter, 2008; Yamin et al., 1999). Firms pursuing this strategy can choose to use differentiation or low cost in the segment selected. According (David & David, 2017), focus strategy is most effective when consumers have distinctive preferences and when rival firms are not attempting to specialize in the same target market. HEIs have adopted focus strategies by concentrating on specific market segments, offering specialized programmes or serving specific category of student demographics. Focus strategies make it possible for HEIs to allocate resources more efficiently or differentiate themselves in order to exploit market opportunities (Hemsley-brown & Oplatka, 2010).

A study by (Alzoubi & Emeagwali, 2016) suggests that there is a weak relationship between differentiation and performance of HEIs, a strong relationship between focus strategy and performance and that there was no observed link between cost strategy and performance. The study further indicated that public-private universities perceived the strongest generic strategy-performance link followed by the public universities.

H₅: Focus strategy has a significant mediating effect on the relationship between internal resources and university performance

Table 1 gives a summary of Porter's generic strategies, and how they can be applied in higher education.

Table 1: Summary of Generic Strategies

Strategy types	Application to Higher Education
Cost leadership	Operational efficiency Outsource non-core services Use of online platforms (e.g registration)
Differentiation	State of the art training facilities Strong brand Alliances with other universities Unique study programmes
Focus strategy	Customized tailor made programmes Specific student demographics Research in specific specialized areas

Author Compilation

3. METHODOLOGY

To test the hypotheses presented above, the study adopted a quantitative research design. Quota sampling technique was used to collect data from 4 universities. Prior to data collection, ethical approval was sought from the University of Zambia, School of Humanities and Social Sciences Ethics Committee (HSSREC-2024 FEB-008).The online link for the questionnaire was then sent via various student networks. Students were assured that their participation was voluntary and that their response would remain anonymous. Each university was considered a sub group, after which participants were conveniently selected from each. 499 participants responded to the online questionnaire via google forms. The study focused on collecting data from students in order for them to provide their perspective on the strategy types. The questionnaire contained 7 independent variables and 1 dependent variable. The study used SPSS version 27 to perform multiple regression analysis and PROCESS Macro version 4.2 in SPSS (Coutts & Hayes, 2023). to test the mediating role of the three strategy types on university performance.

The regression models are presented below;

$$Y_i = \beta_0 + \beta_1 MKA + \beta_2 HRA + \beta_3 RPA + \beta_4 EEA \text{ (i)}$$

Model (i) was used to test the relationship between university performance (Y_i) as dependent variable and marketing, human resources, reputation and educational experience as independent variables representing internal resources.

$$Y_i = \beta_0 + \beta_1 DSA + \beta_2 FSA + \beta_3 CSA \text{ (ii)}$$

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Model (ii) was used to test the relationship between university performance (Yi) as dependent variable and differentiation strategy, focus strategy and cost leadership strategy as independent variables representing strategy types.

In order to perform mediation analysis, the following steps developed by Baron and Kenny had to be taken (Otuya Willis, 2019).

1. Demonstrating that internal resources significantly predict university performance.
2. Demonstrating that internal resources significantly predict strategy types
3. Demonstrating that strategy types significantly predict university performance, when controlling the internal resources.
4. Confirming that the direct effect of the relationship between the internal resources and university performance is reduced with the presence of the mediator.

4. RESULTS

4.1 Descriptive statistics

Out of 499 students that answered the questionnaire, 59 (11.8 percent) were postgraduates and 440 (88.2 percent) undergraduates. Of the 499 respondents, 257 were female and 242 were male. The mean age for the students is 26, with the minimum age being 17 and the maximum being 53 years old. 222 respondents representing university 1, 157 respondents representing university 2, 83 respondents representing university 3 and 37 respondents representing university 4.

4.2 Inferential Statistics

The study conducted multiple regression analysis to test the relationship between internal resources and university performance, and between strategy types and university performance. Since data was collected using a likert scale questionnaire, with multiple indicators for each construct, a composite score had to be computed (Boone & Boone, 2012). The following composite scores were produced, HRA (human resource), MKA (Marketing), RPA (Institutional reputation), EEA (Educational experience), DSA (differentiation strategy), FSA (focus strategy), CSA (Cost leadership strategy) and UPA (university performance). Descriptive statistics were performed and all characteristics confirmed the data to be suitable for further analysis, such as regression analysis. The results of the descriptive statistics are presented in Appendix1. The assumptions of the regression analysis were also confirmed as presented by the scatter plots (linearity), Durbin-Watson (autocorrelation), residual plots (homoscedasticity), histograms (normality of residuals), and Value inflation factor (multicollinearity). Selected results are presented in table 2 and 3, the rest of the results are attached as appendices (see Appendix 1).

The regression analysis results between internal resources and university performance show that the coefficient of determination R^2 is equal to 0.527 (52.7% of university performance is explained by the internal resources) the results indicate there is a positive and significant relationship between all the four internal resources and university performance. The Durbin-Watson value fell with the acceptable range of 1.5 to 2.5, indicating that there is no serious autocorrelation in the residues (De Beer & Swanepoel, 1989). Therefore, H_1 was accepted.

The regression analysis results between strategy types and university performance show that the coefficient of determination is R^2 is 0.484 (48.4% of university performance is explained by strategy types), and the Durbin-Watson value fell within acceptable range. The results also indicates that two out three strategy types, namely differentiation strategy and focus strategy had a positive and significant relationship with university performance. The relationship with cost leadership strategy was insignificant. Therefore, H_2 was partially accepted.

Table 2: The Regression Model Coefficients (Internal resources and university performance)

Model		Unstandardized Coefficients		Sig.	95.0% Confidence Interval for B	
	Variable	Coefficient	Std. Error	P-value	Lower Bound	Upper Bound
1	(Constant)	1.018	0.122	0.001	0.778	1.259
	HRA	0.409	0.045	0.001	0.321	0.498
	EEA	0.129	0.046	0.005	0.039	0.219
	RPA	0.094	0.032	0.003	0.032	0.157
	MKA	0.114	0.032	0.001	0.052	0.176
	R^2			0.527		
	Sig.			0.001		
	Durbin-Watson			1.865		
a Dependent Variable: **UPA**						

Survey data

Table 3: The Regression Model Coefficients (strategy types with university performance)

Model	Variable	Unstandardized Coefficients		Sig.	95.0% Confidence Interval for B	
		Coefficient	Std. Error	P-value	Lower Bound	Upper Bound
1	(Constant)	1.255	.109	.000	1.041	1.469
	DSA	.482	.055	.000	.374	.589
	FSA	.114	.045	.012	.025	.203
	CSA	.075	.046	.105	-.016	.166
	R^2			0.484		
	Sig.			0.001		
	Durbin-Watson			1.703		
a Dependent Variable: **UPA**						
b. Predictors: (Constant), CSA, FSA, DSA						

Survey data

To test hypothesis 3, 4 and 5, the study conducted mediation analysis between the four observed variables of the internal resources on university performance, through each of the strategy types [Differentiation (DSA), Focus (FSA) and Cost leadership (CSA)] as mediators. Selected results are presented in Table 4, and the detailed results have been attached as appendices (see Appendix 2).

The results revealed a significant indirect effect of human resource (HR) through differentiation strategy (b= 0.2039 , t = 3.913). This study found an insignificant indirect effect of human resource on university performance through focus strategy and cost leadership strategy given, (b = 0.0560, t = 1.951,) and (b = 0.168, t = 0.575,) respectively. Therefore, it can be said that only differentiation strategy has a partial complementary mediation effect on the relationship between human resource and university performance.

The results revealed a significant indirect effect of educational experience (EE) through differentiation strategy (b= 0.2622, t = 5.254), and focus strategy (b = 0.0676, t = 2.268). This study found an insignificant indirect effect of educational experience on university performance through cost leadership strategy given (b = 0.0164, t = 0.510,).

The results revealed a significant indirect effect of university reputation (RP) through differentiation strategy (b= 0.1750, t = 6.048). This study found an insignificant indirect effect of university reputation on university performance through focus strategy and cost leadership strategy given, (b = 0.0373, t = 0.1781) and (b = 0.0224, t = 1.1667) respectively.

The results revealed a significant indirect effect of marketing (MKA) through differentiation strategy (b= 0.1566, t = 5.2905). This study found an insignificant indirect effect of marketing on university performance through focus strategy and cost leadership strategy given, (b = 0.0341, t = 2.0059) and (b = 0.0180, t = 1.0465) respectively.

Table 4: Mediation Analysis Output

Variable	Total Effect	Direct Effect	Relationship	Indirect Effect	Confidence Level		t-statistic	Conclusion
					LB	UP		
HR	0.5950 (0.000)	0.3186 (0.000)	HRA on DSA	0.2039	0.1003	0.3058	3.913	Partial mediation
			HRA on FSA	0.0560	-.0001	0.1134	1.951	Insignificant
			HRA on CSA	0.0168	-.0391	0.0743	0.575	Insignificant
EE	0.5484 (0.000)	0.2021 (0.000)	EEA on DSA	0.2622	0.1652	0.3614	5.254	Partial mediation
			EEA on FSA	0.0676	0.0086	0.1254	2.268	Partial mediation

			EEA on CSA	0.0164	-0.0445	0.0809	0.510	Insignificant
RP	0.3537 (0.000)	0.1189 (0.000)	RPA on DSA	0.1750	0.1223	0.2356	6.048	Partial mediation
			RPA on FSA	0.0373	-.0038	0.1134	0.1781	Insignificant
			RPA on CSA	0.0224	-.0143	0.0618	1.1667	Insignificant
MKT	0.3640 (0.000)	0.1553 (0.000)	MKA on DSA	0.1566	0.1021	0.2180	5.2905	Partial mediation
			MKA on FSA	0.0341	-.0002	0.0672	2.0059	Insignificant
			MKA on CSA	0.0180	-.0170	0.0510	1.0465	Insignificant

Survey data

Given the above results, H_3 was rejected, H_4 was accepted and H_5 was partially accepted.

5. DISCUSSION

This study investigated the mediating effect of the three strategy types (differentiation, focus and cost leadership) on the relationship between internal resources and university performance for 4 universities in Zambia. The study established a positive and significant relationship between internal resources and university performance. This indicates that internal resources such human resources, educational experience, reputation and marketing are drivers of performance. These results confirm the preposition of the resource based view (Barney, 2001;1991), that internal resources can help a firm achieve and sustain competitive advantage. Authors, such as (Sánchez-Chaparro et al., 2020; Mainardes et al., 2011; Mazzarol & Soutar, 1999) argue that distinctive competences in HEIs come from their internal resources, including, human resources, reputation, physical structures, programmes offered to mention a few. The study also found a significant relationship between differentiation strategy and university performance, both as a direct effect and an indirect effect (mediator). These findings align with (Alzoubi & Emeagwali, 2016), Edina who found that differentiation strategy had a significant influence (although weak) on university performance. Further, (Mateus & Acosta, 2022) assert that reputation is important as it ensure an institution's differentiation strategy. The study revealed that focus strategy had a positive and significant direct effect on university performance and indirect effect on the relationship between one internal resource (educational experience) and university performance. These findings are, to a small extent, consistent with (Alzoubi & Emeagwali, 2016), becaues, their study found that focus strategy had the strongest influence on university performance. This suggests that universities can use focus strategies to serve niche markets. The findings complement existing studies advocating for focus strategies. Finally, the findings reveal that cost leadership had no significant direct or indirect effect on university performance. These results are also consistent with the findings of (Alzoubi & Emeagwali, 2016), who found that cost leadership had no significant influence on university performance. Pulaj et al., (2015) also argues that low cost strategy is difficult to implement in dynamic environments. These results suggest that adopting cost reduction strategies can affect the quality of service offered.

6. CONCLUSION

The study reveals that university performance is influenced by both direct effects of internal resources, and indirect effects through differentiation strategy. Focus strategy indicated limited indirect effect on university performance and cost leadership strategy no effect at all. The findings suggest that, through differentiation strategies, universities can create unique offerings and experiences to enhance university performance. Universities can tap into niche markets using educational experience resources to enhance university performance. However, cost leadership appears to be an ineffective strategy in the context on the universities under study.

The implications for this study are that university leadership should harness internal resources and align their strategic plans towards differentiation and focus strategies. The limitation of the study is that it relied on only students as respondents, and it did not assess the effect of institutional type. Future studies could explore other potential mediators, such as institutional type, as well as increasing the number of universities to ensure generalizability.

Disclosure statement

No potential conflict of interest was reported by the author(s).

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Availability of Data and Materials

Authors' Contributions

DSMP is the author of this paper, CMM and JC substantially reviewed the article as my research supervisors. All authors have agreed to the submission of this article. As corresponding author, DSMP, I will be accountable for any queries.

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REFERENCES

1) Abdurachman, E., Bandur, A., & Kosasih, W. (2023). *Improving Competitive Advantages of Higher Education Institutions through IT Governance , IT Excellence , and IT Innovation : A Case Study in School of Informatics Management & Computing in Indonesia*. *17*(1), 103–119.

2) Amado Mateus, M., & Juarez Acosta, F. (2022). Reputation in Higher Education: A Systematic Review. In *Frontiers in Education* (Vol. 7). Frontiers Media S.A. https://doi.org/10.3389/feduc.2022.925117

3) Bal, H. Ç., & Erkan, Ç. (2019). Industry 4.0 and Competitiveness. *Procedia Computer Science*, *158*, 625–631. https://doi.org/10.1016/j.procs.2019.09.096

4) Boone, H. N., & Boone, D. A. (2012). Analyzing Likert data. *Journal of Extension*, *50*(2). https://doi.org/10.34068/joe.50.02.48

5) Coutts, J. J., & Hayes, A. F. (2023). Questions of value, questions of magnitude: An exploration and application of methods for comparing indirect effects in multiple mediator models. *Behavior Research Methods*, *55*(7), 3772–3785. https://doi.org/10.3758/s13428-022-01988-0

6) David, F. R., & David, F. R. (2017). *Strategic Management A Competitive Advantage Approach Concepts and cases*.

7) De Beer, C. F., & Swanepoel, J. W. H. (1989). A modified durbin—watson test for serial correlation in multiple regression under nonnormality using the bootstrap. *Journal of Statistical Computation and Simulation*, *33*(2), 75–81. https://doi.org/10.1080/00949658908811188

8) Griffin, R. W. (2015). *Fundamental of Management 8th*. *8th*, 1–547.

9) Haan, H. H. de. (2015). Competitive Advantage, What Does it Really Mean in the Context of Public Higher Education Institutions? *International Journal of Educational Management*, *29*(1), 44–61.

10) Hemsley-brown, J., & Oplatka, I. (2010). *systematic review of the literature on higher education marketing Universities in a competitive global marketplace education marketing*. *19*(4), 316–338.

11) Islami, X., Mustafa, N., & Topuzovska Latkovikj, M. (2020). Linking Porter's generic strategies to firm performance. *Future Business Journal*, *6*(1), 1–15. https://doi.org/10.1186/s43093-020-0009-1

12) Jeketule, J. S. (2018). Intangible Assets for Sustainable Competitive Advantage in Institutes of Higher Learning. *Msingi Journal*, *1*(1). https://doi.org/10.33886/mj.v1i1.57

13) Mainardes, E. W., Ferreira, J. M., & Tontini, G. (2011). Creating a competitive advantage in Higher Education Institutions: proposal and test of a conceptual model. *International Journal of Management in Education*, *5*(2–3), 145–168. https://doi.org/10.1504/IJMIE.2011.039482

14) Manyeki, K., Ongeti, W., & Odiyo, W. (2019). Influence of Porters Generic Strategies on Performance of Private Chartered Universities in Kenya: A Case of Nairobi County. *Journal of Strategic Management*, *2*(5), 47–67.

15) Mazzarol, T., & Soutar, G. N. (1999). Sustainable competitive advantage for educational institutions: A suggested model. *International Journal of Educational Management*, *13*(6), 287–300. https://doi.org/10.1108/09513549910294496

16) Mohammad Alzoubi, A., & Lawrence Emeagwali, O. (2016a). Do generic strategies impact performance in higher educational institutions? A SEM-based investigation. *Business and Economic Horizons*, *12*(2), 42–52. https://doi.org/10.15208/beh.2016.04

17) Mohammad Alzoubi, A., & Lawrence Emeagwali, O. (2016b). Do generic strategies impact performance in higher educational institutions? A SEM-based investigation. *Business and Economic Horizons*, *12*(2), 42–52. https://doi.org/10.15208/beh.2016.04

18) Ngaruko, D. D. (2014). Building Competitive Advantage in Academic Programmes in Open and Distance Learning (ODL) Institutions: Case of The Open University of Tanzania. *Huria: Journal of the Open University of Tanzania*, *18*(1), 135–154.

19) Okwemba, E. M. (2023). Influence of Focus Strategy on Performance of Public Universities in Western Kenya Region. *International Journal of Business and Management Invention (IJBMI) ISSN*, *12*, 1–07. https://doi.org/10.35629/8028-12010107

20) Otuya Willis. (2019). Kenny and Baron 4 Step Analysis (1986): A Case of Employee Job Satisfaction as a Mediator Between Ethical Climate and Performance among Sugarcane Transport Smes in Western Kenya. *Journal of Economics Ad Sustainable Development*, *10*(14). https://doi.org/10.7176/JESD

21) Porter, M. E. (2008). "The Five Competitive Forces That Shape Strategy." Special Issue on HBS Centennial. *Harvard Business Review*, *86*(1), 78–93.

22) Porter, M. E., & Canada, M. M. (1985). *Competitive Creating and Sustaining*.

23) Pulaj, E., Kume, V., & Cipi, A. (2015). The Impact Of Generic Competitive Strategies On Organizational Performance. The Evidence From Albanian Context. In *European Scientific Journal* (Vol. 11, Issue 28).

24) Sánchez-Chaparro, T., Gómez-Frías, V., & González-Benito, Ó. (2020). Competitive implications of quality assurance processes in higher education. The case of higher education in engineering in France. *Economic Research-Ekonomska Istrazivanja* , *33*(1). https://doi.org/10.1080/1331677X.2019.1697329

25) Sigalas, C., & Pekka-economou, V. (2018). *Arising From Its Conceptualization*. *February 2013*. https://doi.org/10.1108/JSMA

26) Soko, J. J. (2014). Intangible Assest for Sustainable Competitive Advantage in Institutes of Higher learning: Kenya. *Msingi Journal*, *1*(1), 1–25.

27) Tanwar, R. (2013). *Porter's Generic Competitive Strategies* (Vol. 15, Issue 1). www.iosrjournals.orgwww.iosrjournals.org

28) Wang, J., Yang, M., & Maresova, P. (2020). Sustainable development at higher education in China: A comparative study of students' perception in public and private universities. *Sustainability (Switzerland)*, *12*(6). https://doi.org/10.3390/su12062158

29) Yamin, S., Gunasekaran, A., & Mavondo, F. T. (1999). Relationship between generic strategies, competitive advantage and organizational performance: An empirical analysis. *Technovation*, *19*(8), 507–518. https://doi.org/10.1016/S0166-4972(99)00024-3

APPENDICES

Appendix 1: Regression Analysis (internal resources and university performance)

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
HRA	499	1.00	5.00	3.1285	.98398	-.037	.109	-.702	.218
EEA	499	1.00	5.00	3.2507	.96948	-.209	.109	-.694	.218
RPA	499	1.00	5.00	4.0705	1.03394	-.970	.109	-.003	.218
MKA	499	1.00	5.00	3.5265	1.04765	-.532	.109	-.311	.218
DSA	499	1.00	5.00	3.3371	.91043	-.237	.109	-.416	.218
FSA	499	1.00	5.00	3.4551	.99532	-.391	.109	-.443	.218
CSA	499	1.00	5.00	3.3126	1.01715	-.093	.109	-.569	.218
UPA	499	1.00	5.00	3.5054	.85336	-.433	.109	-.112	.218
Valid N (listwise)	499								

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.726[a]	.527	.523	.58925	.527	137.621	4	494	<.001	1.865

a. Predictors: (Constant), MKA, HRA, RPA, EEA

b. Dependent Variable: UPA

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	191.133	4	47.783	137.621	<.001 b
	Residual	171.522	494	.347		
	Total	362.655	498			

a. Dependent Variable: UPA

b. Predictors: (Constant), MKA, HRA, RPA, EEA

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B		Correlations			Collinearity Statistics	
		B	Std. Error	Beta			Lower Bound	Upper Bound	Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	1.018	.122		8.321	<.001	.778	1.259					
	HRA	.409	.045	.472	9.131	<.001	.321	.498	.686	.380	.283	.358	2.793
	EEA	.129	.046	.147	2.814	.005	.039	.219	.623	.126	.087	.353	2.832
	RPA	.094	.032	.114	2.968	.003	.032	.157	.429	.132	.092	.644	1.552
	MKA	.114	.032	.140	3.614	<.001	.052	.176	.447	.160	.112	.637	1.570

a. Dependent Variable: UPA

Residuals Statistics^a

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	1.7652	4.7534	3.5054	.61952	499
Residual	-2.75340	1.56012	.00000	.58687	499
Std. Predicted Value	-2.809	2.014	.000	1.000	499
Std. Residual	-4.673	2.648	.000	.996	499

a. Dependent Variable: UPA

Histogram
Dependent Variable: UPA

Mean = 6.13E-16
Std. Dev. = 0.996
N = 499

Normal P-P Plot of Regression Standardized Residual
Dependent Variable: UPA

Scatterplot
Dependent Variable: UPA
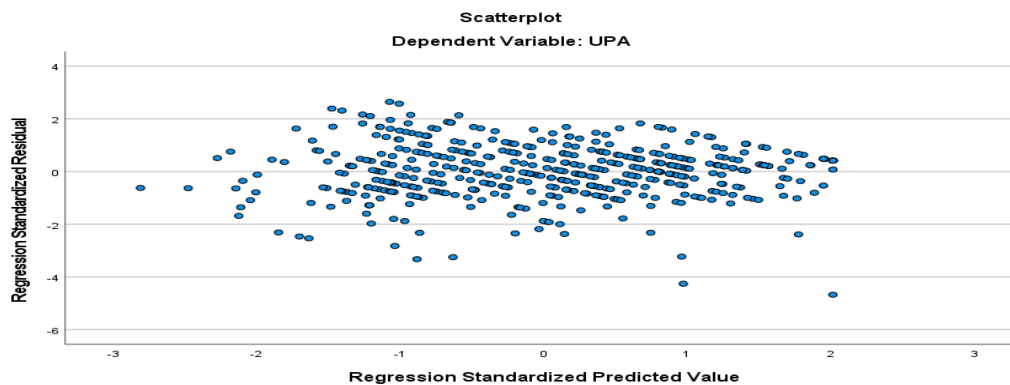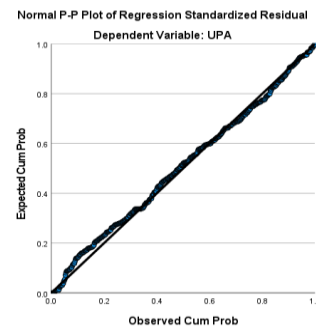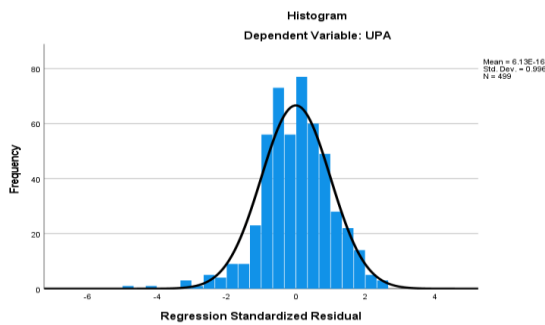
Regression analysis (strategy types and university performance)

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.696^a	.484	.481	.61494	1.702

a. Predictors: (Constant), CSA, FSA, DSA

b. Dependent Variable: UPA

The Mediating Effect of Generic Strategies on Performance of Higher Education Institutions in Zambia

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	175.473	3	58.491	154.678	<.001[b]
	Residual	187.182	495	.378		
	Total	362.655	498			

a. Dependent Variable: UPA
b. Predictors: (Constant), CSA, FSA, DSA

Coefficients[a]

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.	Collinearity Statistics Tolerance	Collinearity Statistics VIF
1	(Constant)	1.255	.109		11.530	<.001		
	DSA	.482	.055	.514	8.785	<.001	.305	3.282
	FSA	.114	.045	.133	2.520	.012	.374	2.671
	CSA	.075	.046	.090	1.625	.105	.343	2.916

a. Dependent Variable: UPA

Residuals Statistics[a]

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	1.9259	4.6094	3.5054	.59360	499
Residual	-2.91306	1.91722	.00000	.61308	499
Std. Predicted Value	-2.661	1.860	.000	1.000	499
Std. Residual	-4.737	3.118	.000	.997	499

a. Dependent Variable: UPA

Histogram
Dependent Variable: UPA
Mean = 1.18E-15
Std. Dev. = 0.997
N = 499

Normal P-P Plot of Regression Standardized Residual
Dependent Variable: UPA

Scatterplot
Dependent Variable: UPA
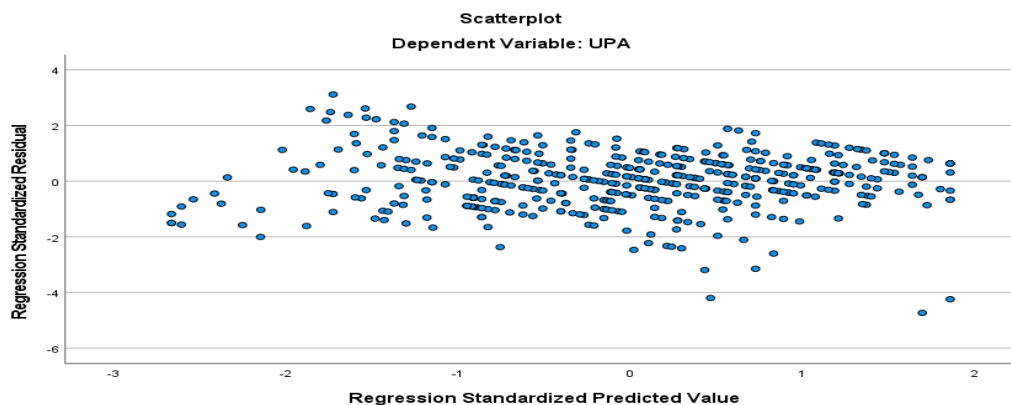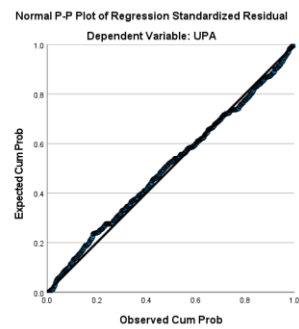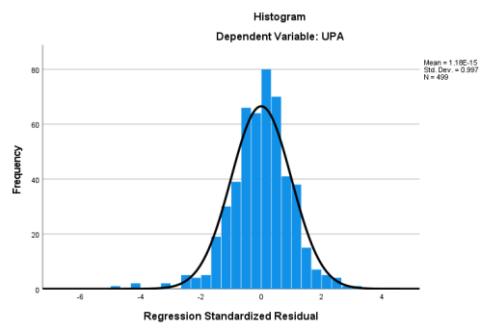
Appendix 2: Mediation Effects Outputs

Run MATRIX procedure:

**************** PROCESS Procedure for SPSS Version 4.2 ****************

Written by Andrew F. Hayes, Ph.D.   www.afhayes.com
Documentation available in Hayes (2022). www.guilford.com/p/hayes3

The Mediating Effect of Generic Strategies on Performance of Higher Education Institutions in Zambia

****

Model : 4
  Y : UPA
  X : HRA
  M1 : DSA
  M2 : FSA
  M3 : CSA

Sample
Size: 499

****

OUTCOME VARIABLE:
DSA
Model Summary

R	R-sq	MSE	F	df1	df2	p
.7756	.6015	.3309	750.2726	1.0000	497.0000	.0000

Model

	coeff	se	t	p	LLCI	ULCI
Constant	1.0921	.0859	12.7115	.0000	.9233	1.2609
HRA	.7176	.0262	27.3911	.0000	.6661	.7691

Standardized coefficients

	coeff
HRA	.7756

****

OUTCOME VARIABLE:
 FSA
Model Summary

R	R-sq	MSE	F	df1	df2	p
.6521	.4252	.5706	367.6064	1.0000	497.0000	.0000

Model

	coeff	se	t	p	LLCI	ULCI
Constant	1.3917	.1128	12.3366	.0000	1.1700	1.6133
HRA	.6596	.0344	19.1731	.0000	.5920	.7272

Standardized coefficients

	coeff
HRA	.6521

****

OUTCOME VARIABLE:
 CSA
Model Summary

R	R-sq	MSE	F	df1	df2	p
.6853	.4696	.5499	440.0300	1.0000	497.0000	.0000

Model

	coeff	se	t	p	LLCI	ULCI
constant	1.0965	.1107	9.9018	.0000	.8789	1.3141
HRA	.7084	.0338	20.9769	.0000	.6420	.7747

Standardized coefficients

coeff

HRA   .6853

****

OUTCOME VARIABLE:

UPA

Model Summary

R	R-sq	MSE	F	df1	df2	p
.7316	.5352	.3412	142.1933	4.0000	494.0000	.0000

Model

	coeff	se	t	p	LLCI	ULCI
constant	1.1888	.1038	11.4537	.0000	.9848	1.3927
HRA	.3186	.0431	7.3854	.0000	.2339	.4034
DSA	.2842	.0586	4.8533	.0000	.1691	.3992
FSA	.0849	.0432	1.9659	.0499	.0000	.1697
CSA	.0237	.0445	.5318	.5951	-.0638	.1111

Standardized coefficients

coeff

HRA   .3674

DSA   .3032

FSA   .0990

CSA   .0282

************************* TOTAL EFFECT MODEL **************************

OUTCOME VARIABLE:

UPA

Model Summary

R	R-sq	MSE	F	df1	df2	p
.6864	.4711	.3859	442.7269	1.0000	497.0000	.0000

Model

	coeff	se	t	p	LLCI	ULCI
constant	1.6431	.0928	17.7116	.0000	1.4609	1.8254
HRA	.5953	.0283	21.0411	.0000	.5397	.6509

Standardized coefficients

coeff

HRA   .6864

************** TOTAL, DIRECT, AND INDIRECT EFFECTS OF X ON Y **************

Total effect of X on Y

Effect	se	t	p	LLCI	ULCI	c_cs
.5953	.0283	21.0411	.0000	.5397	.6509	.6864

Direct effect of X on Y

Effect	se	t	p	LLCI	ULCI	c'_cs
.3186	.0431	7.3854	.0000	.2339	.4034	.3674

Indirect effect(s) of X on Y:

	Effect	BootSE	BootLLCI	BootULCI
TOTAL	.2767	.0475	.1823	.3691
DSA	.2039	.0521	.1003	.3058
FSA	.0560	.0287	-.0001	.1134
CSA	.0168	.0292	-.0391	.0743

Completely standardized indirect effect(s) of X on Y:

	Effect	BootSE	BootLLCI	BootULCI
TOTAL	.3190	.0536	.2134	.4214
DSA	.2351	.0595	.1161	.3514

FSA   .0645   .0331   -.0001   .1309
CSA   .0193   .0336   -.0456   .0851
********************* ANALYSIS NOTES AND ERRORS ***********************
Level of confidence for all confidence intervals in output:
95.0000
Number of bootstrap samples for percentile bootstrap confidence intervals:
 5000
------ END MATRIX -----
Run MATRIX procedure:
**************** PROCESS Procedure for SPSS Version 4.2 ****************
Written by Andrew F. Hayes, Ph.D.   www.afhayes.com
Documentation available in Hayes (2022). www.guilford.com/p/hayes3
****

Model : 4
   Y : UPA
   X : EEA
  M1 : DSA
  M2 : FSA
  M3 : CSA
Sample
Size: 499
****
OUTCOME VARIABLE:
 DSA
Model Summary

R	R-sq	MSE	F	df1	df2	p
.7464	.5571	.3679	625.0649	1.0000	497.0000	.0000

Model

	coeff	se	t	p	LLCI	ULCI
constant	1.0586	.0951	11.1327	.0000	.8718	1.2455
EEA	.7009	.0280	25.0013	.0000	.6458	.7560

Standardized coefficients

	coeff
EEA	.7464

****
OUTCOME VARIABLE:
 FSA
Model Summary

R	R-sq	MSE	F	df1	df2	p
.6220	.3869	.6086	313.6030	1.0000	497.0000	.0000

Model

	coeff	se	t	p	LLCI	ULCI
constant	1.3793	.1223	11.2769	.0000	1.1390	1.6196
EEA	.6386	.0361	17.7088	.0000	.5677	.7094

Standardized coefficients

	coeff
EEA	.6220

****
OUTCOME VARIABLE:
 CSA
Model Summary

R	R-sq	MSE	F	df1	df2	p

.6964   .4850   .5339   467.9999   1.0000   497.0000   .0000
Model
coeff   se   t   p   LLCI   ULCI
constant   .9375   .1146   8.1838   .0000   .7124   1.1626
EEA   .7306   .0338   21.6333   .0000   .6643   .7970
Standardized coefficients
 coeff
EEA   .6964
****
OUTCOME VARIABLE:
UPA
Model Summary
R   R-sq   MSE   F   df1   df2   p
.7110   .5055   .3630   126.2537   4.0000   494.0000   .0000
Model
coeff   se   t   p   LLCI   ULCI
constant   1.1597   .1086   10.6783   .0000   .9463   1.3731
EEA   .2021   .0435   4.6514   .0000   .1167   .2875
DSA   .3741   .0585   6.3956   .0000   .2592   .4890
FSA   .1059   .0444   2.3864   .0174   .0187   .1931
CSA   .0225   .0467   .4814   .6305   -.0693   .1143
Standardized coefficients
coeff
EEA   .2296
DSA   .3991
FSA   .1235
CSA   .0268
************************** TOTAL EFFECT MODEL **************************
OUTCOME VARIABLE:
UPA
Model Summary
R   R-sq   MSE   F   df1   df2   p
.6230   .3881   .4465   315.2416   1.0000   497.0000   .0000
Model
coeff   se   t   p   LLCI   ULCI
constant   1.7228   .1048   16.4455   .0000   1.5170   1.9287
EEA   .5484   .0309   17.7550   .0000   .4877   .6090
Standardized coefficients
coeff
EEA   .6230
************* TOTAL, DIRECT, AND INDIRECT EFFECTS OF X ON Y *************
Total effect of X on Y
Effect   se   t   p   LLCI   ULCI   c_cs
.5484   .0309   17.7550   .0000   .4877   .6090   .6230

Direct effect of X on Y
Effect   se   t   p   LLCI   ULCI   c'_cs
.2021   .0435   4.6514   .0000   .1167   .2875   .2296

Indirect effect(s) of X on Y:
Effect   BootSE   BootLLCI   BootULCI
TOTAL   .3462   .0432   .2629   .4335
DSA   .2622   .0499   .1652   .3614

FSA	.0676	.0298	.0086	.1254
CSA	.0164	.0321	-.0445	.0809

Completely standardized indirect effect(s) of X on Y:

Effect	BootSE	BootLLCI	BootULCI
TOTAL	.3934	.0473	.3024	.4891
DSA	.2979	.0558	.1900	.4075
FSA	.0768	.0337	.0096	.1413
CSA	.0187	.0364	-.0504	.0922

*********************** ANALYSIS NOTES AND ERRORS ***********************

Level of confidence for all confidence intervals in output:

95.0000

Number of bootstrap samples for percentile bootstrap confidence intervals:

5000

------ END MATRIX -----

Run MATRIX procedure:

**************** PROCESS Procedure for SPSS Version 4.2 ****************

Written by Andrew F. Hayes, Ph.D.   www.afhayes.com

Documentation available in Hayes (2022). www.guilford.com/p/hayes3

****

Model : 4

 Y : UPA

 X : RPA

 M1 : DSA

 M2 : FSA

 M3 : CSA

Sample

Size: 499

****

OUTCOME VARIABLE:

DSA

Model Summary

R	R-sq	MSE	F	df1	df2	p
.4281	.1833	.6784	111.5094	1.0000	497.0000	.0000

Model

	coeff	se	t	p	LLCI	ULCI
constant	1.8027	.1499	12.0256	.0000	1.5082	2.0972
RPA	.3769	.0357	10.5598	.0000	.3068	.4471

Standardized coefficients

	coeff
RPA	.4281

****

OUTCOME VARIABLE:

FSA

Model Summary

R	R-sq	MSE	F	df1	df2	p
.4342	.1885	.8055	115.4493	1.0000	497.0000	.0000

Model

	coeff	se	t	p	LLCI	ULCI
constant	1.7538	.1634	10.7360	.0000	1.4328	2.0748
RPA	.4180	.0389	10.7447	.0000	.3415	.4944

The Mediating Effect of Generic Strategies on Performance of Higher Education Institutions in Zambia

Standardized coefficients

coeff

RPA   .4342

****

OUTCOME VARIABLE:

 CSA

Model Summary

R	R-sq	MSE	F	df1	df2	p
.4336	.1880	.8418	115.0816	1.0000	497.0000	.0000

Model

	coeff	se	t	p	LLCI	ULCI
constant	1.5763	.1670	9.4393	.0000	1.2482	1.9044
RPA	.4266	.0398	10.7276	.0000	.3484	.5047

Standardized coefficients

coeff

RPA   .4336

****

OUTCOME VARIABLE:

UPA

Model Summary

R	R-sq	MSE	F	df1	df2	p
.7071	.5000	.3671	123.4907	4.0000	494.0000	.0000

Model

	coeff	se	t	p	LLCI	ULCI
constant	.9892	.1262	7.8351	.0000	.7411	1.2372
RPA	.1189	.0298	3.9914	.0001	.0604	.1774
DSA	.4644	.0542	8.5681	.0000	.3579	.5708
FSA	.0893	.0450	1.9846	.0477	.0009	.1778
CSA	.0525	.0459	1.1442	.2531	-.0377	.1428

Standardized coefficients

coeff

RPA   .1441

DSA   .4954

FSA   .1042

CSA   .0626

************************** TOTAL EFFECT MODEL **************************

OUTCOME VARIABLE:

UPA

Model Summary

R	R-sq	MSE	F	df1	df2	p
.4285	.1836	.5957	111.7911	1.0000	497.0000	.0000

Model

	coeff	se	t	p	LLCI	ULCI
constant	2.0658	.1405	14.7053	.0000	1.7898	2.3418
RPA	.3537	.0335	10.5731	.0000	.2880	.4194

Standardized coefficients

coeff

RPA   .4285

************** TOTAL, DIRECT, AND INDIRECT EFFECTS OF X ON Y **************

Total effect of X on Y

Effect	se	t	p	LLCI	ULCI	c_cs
.3537	.0335	10.5731	.0000	.2880	.4194	.4285

The Mediating Effect of Generic Strategies on Performance of Higher Education Institutions in Zambia

Direct effect of X on Y

Effect	se	t	p	LLCI	ULCI	c'_cs
.1189	.0298	3.9914	.0001	.0604	.1774	.1441

Indirect effect(s) of X on Y:

Effect		BootSE	BootLLCI	BootULCI
TOTAL	.2348	.0251	.1875	.2861
DSA	.1750	.0290	.1223	.2356
FSA	.0373	.0209	-.0038	.0768
CSA	.0224	.0192	-.0143	.0618

Completely standardized indirect effect(s) of X on Y:

Effect		BootSE	BootLLCI	BootULCI
TOTAL	.2845	.0272	.2328	.3388
DSA	.2121	.0335	.1498	.2807
FSA	.0452	.0251	-.0046	.0927
CSA	.0272	.0232	-.0172	.0734

*********************** ANALYSIS NOTES AND ERRORS ***********************

Level of confidence for all confidence intervals in output:

 95.0000

Number of bootstrap samples for percentile bootstrap confidence intervals:

 5000

------ END MATRIX -----

Run MATRIX procedure:

**************** PROCESS Procedure for SPSS Version 4.2 ****************

Written by Andrew F. Hayes, Ph.D.   www.afhayes.com

Documentation available in Hayes (2022). www.guilford.com/p/hayes3

****

Model : 4

   Y : UPA

   X : MKA

  M1 : DSA

  M2 : FSA

  M3 : CSA

Sample

Size: 499

****

OUTCOME VARIABLE:

 DSA

Model Summary

R	R-sq	MSE	F	df1	df2	p
.4000	.1600	.6977	94.6560	1.0000	497.0000	.0000

Model

	coeff	se	t	p	LLCI	ULCI
constant	2.1113	.1314	16.0652	.0000	1.8531	2.3695
MKA	.3476	.0357	9.7291	.0000	.2774	.4178

Standardized coefficients

	coeff
MKA	.4000

****

OUTCOME VARIABLE:

 FSA

Model Summary

```
R     R-sq    MSE      F       df1     df2       p
.3753  .1409  .8528  81.4911  1.0000  497.0000  .0000
Model
        coeff    se       t        p      LLCI    ULCI
constant 2.1977  .1453  15.1248  .0000  1.9122  2.4831
MKA      .3566  .0395   9.0272  .0000   .2790   .4342
Standardized coefficients
        coeff
MKA     .3753
```
****
OUTCOME VARIABLE:
 CSA
Model Summary
```
R     R-sq    MSE      F       df1     df2       p
.3970  .1576  .8733  92.9808  1.0000  497.0000  .0000
Model
        coeff    se       t        p      LLCI    ULCI
constant 1.9534  .1470  13.2854  .0000  1.6645  2.2423
MKA      .3854  .0400   9.6427  .0000   .3069   .4640
Standardized coefficients
        coeff
MKA     .3970
```
****
OUTCOME VARIABLE:
 UPA
Model Summary
```
R     R-sq    MSE       F        df1     df2       p
.7166  .5136  .3571  130.3944  4.0000  494.0000  .0000
Model
        coeff    se       t        p      LLCI    ULCI
constant .9692  .1179   8.2214  .0000   .7375  1.2008
MKA      .1553  .0283   5.4941  .0000   .0998   .2109
DSA      .4507  .0536   8.4109  .0000   .3454   .5559
FSA      .0955  .0441   2.1663  .0308   .0089   .1822
CSA      .0466  .0453   1.0309  .3031  -.0423   .1356
Standardized coefficients
        coeff
MKA     .1907
DSA     .4808
FSA     .1114
CSA     .0556
```


*************************** TOTAL EFFECT MODEL ***************************
OUTCOME VARIABLE:
 UPA
Model Summary
```
R     R-sq    MSE       F        df1     df2       p
.4469  .1997  .5840  124.0294  1.0000  497.0000  .0000
Model
        coeff    se       t        p      LLCI    ULCI
constant 2.2217  .1202  18.4782  .0000  1.9855  2.4580
MKA      .3640  .0327  11.1368  .0000   .2998   .4282
```

Standardized coefficients

  coeff

MKA   .4469

************** TOTAL, DIRECT, AND INDIRECT EFFECTS OF X ON Y **************

Total effect of X on Y

Effect	se	t	p	LLCI	ULCI	c_cs
.3640	.0327	11.1368	.0000	.2998	.4282	.4469

Direct effect of X on Y

Effect	se	t	p	LLCI	ULCI	c'_cs
.1553	.0283	5.4941	.0000	.0998	.2109	.1907

Indirect effect(s) of X on Y:

Effect	BootSE	BootLLCI	BootULCI
TOTAL	.2087	.0263	.1592	.2621
DSA	.1566	.0296	.1021	.2180
FSA	.0341	.0170	-.0002	.0672
CSA	.0180	.0172	-.0170	.0510

Completely standardized indirect effect(s) of X on Y:

Effect	BootSE	BootLLCI	BootULCI
TOTAL	.2562	.0293	.2003	.3142
DSA	.1923	.0344	.1272	.2619
FSA	.0418	.0207	-.0002	.0821
CSA	.0221	.0211	-.0209	.0628

*********************** ANALYSIS NOTES AND ERRORS ***********************

Level of confidence for all confidence intervals in output:

95.0000

Number of bootstrap samples for percentile bootstrap confidence intervals:

  5000

------ END MATRIX -----