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Risk Management Mediates the Relationship Between Outsourcing and Profitability of Manufacturing Firms

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Abstract

Over decades, manufacturing firms are struggling to remain competitive in an intense manufacturing industry. The struggle is due to increasing manufacturing companies dealing in similar or related products. Given the competitive dynamics in the manufacturing industry, firms are proactively searching for viable strategies to ensure profitability and survival. Scholars and management have jointly conducted studies to find amicable strategies influencing firms' profitability. Whereas various studies have been conducted on profitability, majority of these studies were concerned with strategies directly influencing profitability with little attention on the mediating role of other strategies. Specifically, little is known on mediation studies in manufacturing industry. Despite strategies directly influencing profitability being established, firms' are in receivership with several kicked out of business indefinitely. This study bridges the gap by considering the mediating role of risk management on outsourcing and profitability of manufacturing firms. A cross-sectional research design was adopted. Specifically, a partial mediation approach was adopted following Baron and Kenny mediation guidelines. Results from Med-Graph and Sobel tests proved that risk management significantly mediated the relationship between outsourcing and profitability (Sobel Z-value = 3.441, p = 0.002). Hence, firms are encouraged to embrace mediation strategies in ensuring profitability and survival in the competitive environment.

Keywords

Outsourcing; risk management; profitability; mediation; manufacturing firms.

1. Introduction

Survival for the fittest is a way to go for manufacturing firms operating in an intense competitive industry. This slogan has forced management of manufacturing firms to be more innovative to adopt strategies that are superior to encounter their business rivals and survive economic meltdown. Researchers have established that outsourcing and risk management directly influence profitability of many companies [1], [2], [63], [20], [11], [38], [23]. Profitability is a key measurement indicator for firms' financial performance that many scholars are arguing manufacturing firms to pay attention to it [41], [5], [2], [14], [55]. Despite numerous efforts to safe guard firms' financial performance, little attention has been paid to the mediating role of risk management on firm's profitability that this study addressed herein. Mediation studies are increasingly important in various research fields and are crucial in understanding the interplay of factors to enhance goal achievement [46], [12], [36], [10].

2. Literature and Hypothesis

With realities of competition amongst manufacturing firms, financial performance is important to translate firms into successful performers [32], [40], [42], [43], [55], [60]. Accordingly, scholars and management continuously look for viable strategies to sustain their profits. Outsourcing is mentioned as one way to save company costs that are translated into improved profits capable of financing firms' operations [25], [3]. Despite such recommendations, reports based on findings from selected manufacturing firms showed that outsourcing insignificantly influences profitability [37]. Such contradictions leave management with mixed feeling about its application. However, other scholars propose risk management as a key strategy to influence profitability of manufacturing firms [41], [57], [47], [18], [38], [48], [29]. With these direct strategies determining firms' profitability performance, lays a ground to slot in interactive effect among these strategies to see if profitability can be achieved through mediation since mediation studies pays vital role [6], [62], [4], [8], [1].

Reports show that firm's motivation to outsource plays a crucial role in financial performance of manufacturing firms [53], [39], [24], [19]. It adds that intense competition and declining profits facing manufacturing firms have forced these firms to explore multiple strategies to overcome pressures. Outsourcing is found to be viable strategy enhancing firms' capabilities to overcome competitive pressure. This strategy has seen firms devoting their resources to more value adding activities supporting their survival [23], [15]. However, as firms rush for such innovative strategies, management needs to define which activities are core in order to commit their resources for profitable reaping [15]. Despite increasing adoption of outsourcing strategies to boost profitability, manufacturing firms are persistently experiencing financial challenges [49]. This is where management need to carefully decide which activities should be outsourced while weighing economic returns as compared to when previously managed in-house. This comparison is about cost reduction that qualifies why companies should outsource based on transaction costs [7], [56]. Besides cost reduction motive of outsourcing, manufacturing firms are able to acquire skillful manpower and avail their products to near markets altogether contributing significantly to improved profitability [56].

Whereas outsourcing is commonly evidenced in manufacturing firms, reports show that risk management strategies are inevitable in influencing firms' profitability performance [59], [57]. Relatedly, risk planning helps firms to devise means of reducing adverse effects on firms' operations through forecasting [17], [35], [48]. Particular reports show that successful financial institutions attribute their success to risk management strategies involving planning, forecasting and ranking risks [26]. This notion is supported since risk management enables firms to measure and quantify risks detrimental to their financial performance [31], [50], [61]. This approach is equally useful for manufacturing firms since managing risks would enable them to breakeven and hence profitability [38]. The discussion above demonstrates use of multiple strategies to directly enhance profitability of firms without considering mediation effects among established strategies. This leads to the proposed hypothesis. H. Risk management mediates the relationship between outsourcing and profitability of manufacturing firms.

3. Methodology

A deductive approach involving quantitative techniques was used in this study. This approach was selected because its quantitative techniques are good in providing accurate estimates, reliable results, and objective recommendations [51]. A self- administered questionnaire was physically distributed to 164 respondents in 82 manufacturing firms in Uganda. These firms were selected from a population of 100 firms based on Krejcie and Morgan (1970) sampling tables. Two respondents were purposively selected from each organization based on management and supervisory roles. The decision for purposive sampling was due to the level of knowledge on company performance from the two positions. Repeated visits and reminders through phone calls were made resulting to 161 valid responses representing a 98.2% response rate. Measurement indicators were adopted and modified from previous studies. The questionnaire was tested for reliability and validity using Cronbach Alpha and Content validity index respectively and the results are reported in Table 1. Data screening was performed to check on completeness, accuracy, normality, outliers, reliability and validity. Mediation test was performed in five systematic steps including the first three steps of correlation, fourth step of hierarchical regression and the fifth step covering Sobel test. All these steps were necessary as a requirement for partial mediation [52], [22], [34], [45], [33], [9]. Data analysis was conducted using SPSS software and Med-Graph excel programme. SPSS was used for correlations and regressions while Med-Graph based on Sobel tests was used to determine mediation effect following [27], [9]. The Sobel test results are presented in Table 2 with corresponding mediation Figure 1.

4. Results and Discussion

The first three steps of mediation test covering correlations show that outsourcing, risk management and profitability variables are significantly related to each other as depicted by beta coefficients (Outsourcing and risk management: $\beta = 0.660$, $p = 0.000$; Risk management and Profitability: $\beta = 0.598$, $p = 0.000$ and Outsourcing and Profitability: $\beta = 0.521$, $p = 0.000$). Additionally, hierarchical regression results showed that both outsourcing and risk management are significantly related to profitability ($\beta = 0.451$, $p = 0.000$). Finally, Sobel test proved that risk management significantly mediated the relationship between outsourcing and profitability of manufacturing firms as depicted from Sobel Z-value (Sobel Z-value = 3.44119, $p = 0.000579$). This implies that there is a partial mediation since outsourcing predicted profitability directly ($\beta = 0.223$) and indirectly through risk management ($\beta = 0.297$) totalling to 0.521 beta coefficient. Hence, hypothesis is significantly supported. The results enable management understanding of how these strategies interact to enhance profitability of manufacturing firms [44], [33], [58], [45]. Furthermore, the mediating role of risk management would play a significant role in supporting policy formulation in the manufacturing sector [28], [13], [54]. Management should emphasize on deploying these two strategies together in order to promote profitability and successfully survive competitive pressure facing manufacturing industry.

Table 1. Reliability and Validity results

Variable	Cronbach Alpha	Content Validity Index
Outsourcing	0.835	0.813
Risk Management	0.819	0.810
Profitability	0.830	0.714

Table 2. Sobel test results

Type of mediation: Significant

Sobel z-value = 3.44119, p = 0.000579			
95% Symmetrical Confidence interval			
	Lower	0.08263	
	Higher	0.30132	
Unstandardized indirect effect			
	a*b	0.19198	
	se	0.05579	
Effective Size measures			
Standardised Coefficients			R^2 Measures (Variance)
Total:		0.521	0.271
Direct:		0.223	0.028
Indirect:		0.297	0.242
Indirect to Total ratio		0.571	0.895

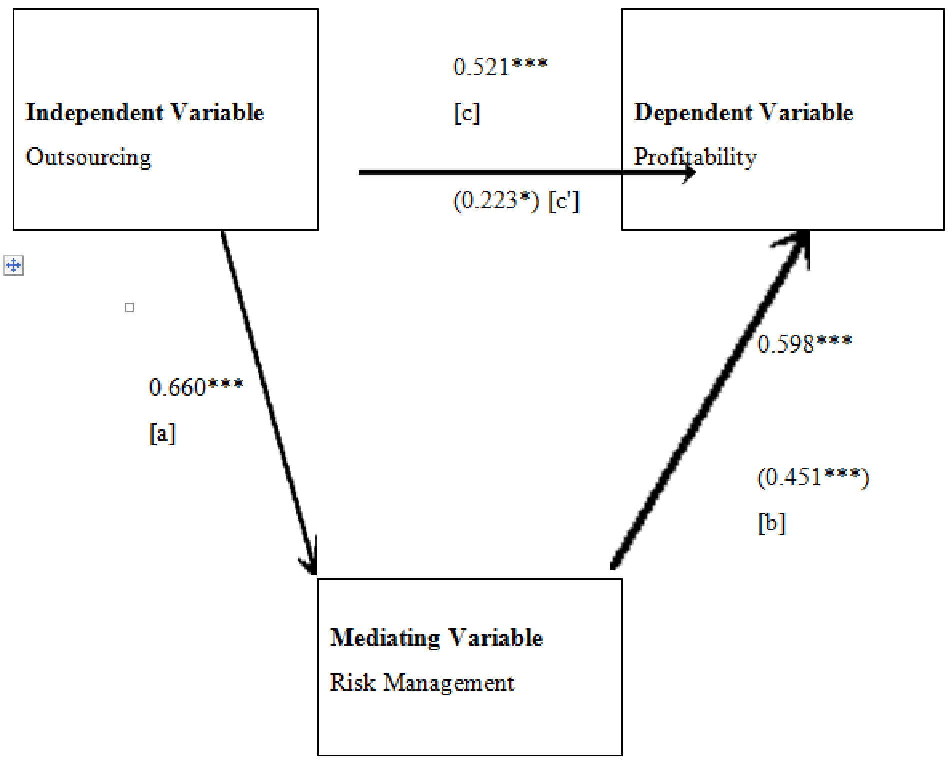

Figure 1. Risk management mediating Outsourcing and Profitability

5. Conclusion, Recommendations and Limitations

Cost transaction theory advocates for cost reductions amongst firms to manage their operations in order to survive the competition wave. Accordingly, management should explore an array of strategies to cope up with such competitive pressures. This has seen rising numbers of firms adopting a hybrid management style comprising of more than one strategy to excel in dynamic environment. The Sobel results of this study demonstrates this hybrid mechanism that management of manufacturing firms could employ through interactive effects of risk management and outsourcing to successfully achieve profit maximization. Hence, manufacturing firms are advised to adopt simultaneous application of risk management strategies and outsourcing practices to stimulate financial performance in order to remain competitive in the dynamic environment. This study was limited to a cross-sectional research design focusing on the role of risk management on outsourcing and profitability of manufacturing firms. Accordingly, future researchers are encouraged to adopt a longitudinal study and considering more factors to in ensuring profitability in manufacturing firms and beyond.

6. Data availability statement

This manuscript is prepared based on the statistical results determined using SPSS and Med-Graph excel programme based on Barron and Kenny mediation approach as reflected in the methodology and results sections above. The dataset for the analysis is available and can be submitted on request.

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