Influence of Horizontal Coopetition in Outbound Logistics on the Profitability of Micro and Small Enterprises: A Case of Arusha Handicraft Industry

Twazihirwa Tunzo Mnzava[1]
[1]The Open University of Tanzania
mnzavatt@gmail.com

Gwahula Raphael[2]
[2]The Open University of Tanzania

Hawa Uiso[3]
[3] Tumaini University

ABSTRACT

This study assessed the influence of horizontal coopetition in outbound logistics on the profitability of micro and small enterprises in the handicraft industry using the Theory of Coopetition and Resource Dependence Theory as theoretical frameworks. The horizontal coopetition in outbound logistics is hypothesized to influence profitability, and the resource interdependence between the MSEs was thought to moderate the influence. A sample of 159 MSEs from a population of 297 MSEs in Arusha, Tanzania took part in the study, using a stratified random sampling method. A survey approach was used to collect the data, which were quantitatively analysed using the moderated multiple linear regression (MLR) model to test the hypotheses. The results before and after moderation revealed that horizontal coopetition in outbound logistics had a positive and significant influence on the profitability of the MSE. After the introduction of the moderator, the resource interdependence had no statistically significant moderation influence in the way horizontal coopetition in outbound logistics influenced the MSE profitability. The study had contextual limitations of generalization even in MSEs engaged in the handicraft industry. More research needs to be done in a rural setting, involving more variables of horizontal coopetition in outbound logistics, and factoring in the MSE attributes as moderators. It is recommended that similar studies be conducted in more tourist areas. More empirical data on horizontal coopetition from industry-specific MSEs are recommended to vindicate what was generated in this study since it would add more understanding and knowledge to the theory of coopetition.

Key Words: MSE, horizontal coopetition, competition, cooperation, outbound logistics, profitability, handicraft industry

INTRODUCTION

Coopetition is defined as a paradoxical business relation between firms that create value through cooperative interaction while they simultaneously compete to capture part of the value (Bengtsson and Kock, 2014; Bouncken *et al*., 2015). Coopetitive behaviour has been found to improve business performance in terms of innovation, market positioning, and profitability (Feela, 2020). Although coopetition is an important economic strategy for most firms in today's shifting market, it lacks a well-established theory. Its framework is based on several theories, including game theory (Zacharia *et al*., 2019), resource-based perspective and cognitive theory (Bengtsson *et al*., 2016), network theory (Sanou *et al*., 2016), and resource dependency theory (Chiambaretto and Fernandez, 2016; Zacharia *et al*., 2019). A blend of micro, small, medium and large-scale businesses drives the global economy (Ghalke *et al*., 2018). In developed economies, small and medium enterprises account for about 95 per cent of all firms. In developing nations, SMEs provide about 60% and 70% of GDP and total employment respectively and account for over 80% and 50% of all employment in Africa and Tanzania's GDP respectively (Argidius, 2017;Nkwabi and Mboya, 2019;Zafar and Mustafa, 2017). According to Muriithi (2017), an SME is a business with fewer than 250 employees. Small enterprises may have fewer than 50 employees, and micro-enterprises have between 5 and 10 employees. More than half of enterprises in developing economies' countries employ less than 100 people. In developing economies, Micro and Small Enterprises (MSEs) make up the bulk of SMEs (Granata *et al*., 2018). Micro and Small Enterprises (MSE) are defined according to the type of economy and the investment capital in various sectors of the economy (Dar *et al*., 2017). A firm is an MSE if it has less than 50 employees and capital investments of not more than TZS 200 Million (Mzomwe and Mutarubukwa, 2015). In Tanzania, MSEs are the two lowest levels in enterprise classification, and they belong to SMEs. SMEs are found in almost all industries in any economy. While each type of SME has an impact on individuals, society and the country's economy (Wayan *et*

al., 2021), those in handicrafts are of particular interest in developing economies as they are both pro-poor and leverage the homestead economy (Tambwe, 2017). A study by Yasa *et al*., (2017) show that the handicraft industry is one of the sectors that is heavily affected by a lack of support from the government and BDS, incompetent personnel, and stiff competition from medium and larger firms. These challenges have significantly affected their performance and growth (Tambwe, 2017). Feela (2020) noted economic crisis, lack of support, incompetent personnel, and stiff competition were responsible for the poor SMEs' profitability. These challenges were also the key drivers behind firms' propensity to coopetition; collective use of resources from rival firms against giant firms' dominance in the competitive market. Studies in horizontal coopetition have focused on its impact on the performance of medium and large businesses in developed economies, rather than SMEs in emerging economies such as Africa (Feela, 2020). Examples of such studies are in the wine sector in France and New Zealand (Granata *et al*., 2018), tourism and leisure suppliers in Austria (Schnitzer *et al*., 2018), and electric car production by Volkswagen and Daimler in Germany (Czakon *et al*., 2020), and electronic software and high-tech industries in Europe and Asia (Chen *et al*., 2019). They also focused on the pre-production and production stages of businesses' operations, but not on post-production activities or their impact on profitability (Flanagan *et al*., 2018; Jakobsen, 2019). Furthermore, the majority of research in horizontal coopetition focused on industrialized countries rather than emerging economies such as Africa (Feela, 2020), with no studies in Tanzania. This study endeavoured to assess the influence of horizontal coopetition in outbound logistics on the profitability of micro and small enterprises (MSE) in the Tanzania handicraft industry. It addressed the context issues and focused on MSE's profitability in a developing economy by studying the handicraft MSE in Arusha, Tanzania.

Problem Discussion

The global market competition creates enterprises' performance challenges in profitability throughout their life cycles (Argidius, 2017;Chandra et al., 2020; Flanagan *et al*., 2018) which inhibit growth and sustainability (Ye and Kulathunga, 2019). As the medium and large enterprises collaborate to grab the market share, other enterprises must also collaborate among themselves

as an option to remain in business and be profitable (Isada, 2020). The collaboration of competing firms is called coopetition. According to Cygler *et al*. (2018), vertical and horizontal coopetition remains the effective survival strategy for most businesses, from large to micro-enterprises. Different studies on coopetition have focused on either coopetition of firms in developed economies (Feela, 2020), or on medium and large enterprises' performance, or on comparing firms that coopete and those that don't (Lechner *et al*., 2016). There are no studies that have focused on MSEs' coopetition in developing economies and a sector-specific industry like handicrafts. The coopetition model contends that the value-net framework proposition is used to build the coopetition strategy between stakeholders (Brandenburger and Nalebuff, 1996). Flanagan *et al*. (2018) noted that firms can coopete in processes in the pre-production, production, and post-production phases of business to improve their performance. Previous studies on coopetition and performances concentrated on the pre-production and production phases of firms' operations (Bacon *et al.,* 2020; Jakobsen, 2019; Pekovic *et al.,* 2019) and neither on post-production activities nor its influence on profitability (Flanagan *et al*., 2018). Brandenburger and Nalebuff (1996) indicated that the post-production phase of the business operation creates more profitability than the other phases.

Study Objectives

The main objective of this study was to investigate the influence of horizontal coopetition in the post-production processes on the profitability of MSEs in the handicraft industry. Specifically, the study was designed to assess the influence of horizontal coopetition in transportation on the profitability of an MSE and the influence of horizontal coopetition in the warehousing of the goods to the customers on the profitability of an MSE. Additionally, the study investigated the moderating effect of resource interdependence on the way the horizontal coopetition in outbound logistics influence the MSE profitability. The context of the study was the handcraft MSE in Arusha, Tanzania, to address coopetition in the business environment of an emerging economy.

Literature Reviews

Theoretical Literature Review

The study on the influence of outbound logistics coopetition on the profitability of handicraft MSEs targeted the competing enterprises that strategically cooperate among themselves to be powerful enough to be profitable by winning the market for their crafts. The Theory of Coopetition (TOC) and the Resource Dependence Theory (RDT) were used as theoretical frameworks in this study. The two theories aided in the theoretical understanding of the variables that are thought to influence MSE profitability and the way this influence is moderated. The theories also assisted to formulate the study's conceptual framework. The TOC proposes a theoretical model which suggests that coopetition will add value and provide higher results when compared to cooperation and competition models since cooperative and competitive behaviours are combined to produce the major advantages of coopetition in terms of performance(Robert *et al*., 2018). In this study's context, firms use the cooperative dimension of coopetition to gain access to critical resources to lower the distribution costs and sell more products at better prices, while the competitive aspect of coopetitive is critical for avoiding complacency and maintaining creative friction amongst the firms involved.

During coopetition, firms can, among other things, access and better exploit resources, achieve efficiency, acquire market power, and reach high performance (Bouncken *et al*., 2015; Ritala, 2012). Coopetition is, therefore about focusing on the customers' needs and seeing the players, not as competitors alone but as complementors, co-value creators, and appropriators focused on bringing in more customers that will make more sales and therefore more profits. Coopetition is when cooperation with the competitor is focused on helping the customer to value the competing firm's products more when the customer has the competitor's products than when they have the competing firm's products alone. TOC asserts that it is competition and cooperation attributes that can uniquely interplay simultaneously to create a coopetition mechanism, making it the best strategic option and the most efficient way of the relationship between firms that can create profitability among the players (Gnyawali and Charleton, 2018; Le Roy and Czakon,

2016;Walley, 2007).The concept of coopetition has four different constructs namely; simultaneity of competition and cooperation occurrence, paradoxical nature of co-opetition, value creation intention, and value appropriation goal (Bengtsson and Raza-ullah, 2017;Gnyawali and Charleton, 2018). These constructs yield two main variables, namely; coopetition (here referred to as value creation intention and appropriation) as the predictor variable and profitability as the dependent variable. To better achieve profitability in coopetition, RDT proposes a balance of power between the coopetitors, since Brandenburger and Nalebuff (1996) claimed that in any phase of the business cycle, the complementors and competitors play interchangeably to create value that is large enough to benefit all by bringing in more customers. Here comes the need to employ RDT. Resources interdependence is a variable in the RDT that determines the power balance and influences how enterprises interact, in our case, the coopetition.

The RDT proposes that organisational performance depends on the firm's ability to acquire and control critical resources from the external environment (Pfeffer and Salancik, 1978) and to control the market of the firm's products (Davis and Cobb, 2009). According to Frączkiewicz-Wronka and Szymaniec (2012), RDT explains the way the firms' mutuality and interdependence affect organisations' operations. The RDT underscores the strategic resources management mechanisms employed by taking advantage of dependence and uncertainty inherent in a relationship to gain power (Jen-Yin, Ching-Yi, Chao-Kuei, Shu-Hui, and Lee-Chia, 2017). The RDT examines bilateral resource exchange for power through mutual reliance and power imbalance between two players, and a situation where interdependence confers power on bilaterally connected actors over a third-party actor. The former situation motivates the actors to enter into either competition, cooperation, or coopetition, In the latter situation, the RDT conceptualizes a way actors exchange and share resources and utilize them to obtain power that can be used to influence third-party actors (Casciaro and Piskorski, 2005). In this respect, RDT that was propounded by Pfeffer and Salancik, and modified by Casciaro and Piskorski, can be used as a framework to study moderation mechanisms in coopetition(van den Broek, Boselie, and Paauwe, 2018). The resource interdependence as a variable in RDT has a moderating effect on the

coopetition, because coopetition turns out to be more cooperative if the firms' resources leverage power among the firms. Coopetition is supposed to influence a company's performance (in our context, profitability). This can happen in the pre-production, production, or post-production phases of a business operation, where the firm's performance is determined by several coopetition components. The coopetition in this study takes place throughout the post-production phase of operation. Outbound logistics in transportation and warehousing were the components of the coopetition variable under investigation. The inclination for enterprises to coopete is determined by their degree of interdependence, and according to the RDT, interdependence is contingent on mutual power between firms, which is dependent on the coopeting firms' possession of resources required by the third party (market).

The resource interdependence is, therefore the moderator of coopetition as it influences the ability of the MSE to deliver value to the customer through working with the competitor to reduce the downstream costs and achieve profitability. By using resource interdependence in RDT as the moderating variable in studying coopetition, the firms are inclined to compete depending on the firm's affinity of resources from another. The firm's ability to compete with rival firms to acquire critical resources from each other and reduce transactional costs to the market increases its power over the market and influences its performance (McConnell *et al*., 2009). The ability of an individual MSE to capture value in the market depends on the joint value creation achieved by coopetition with another MSE since proper and strategic resources combination creates more value than the sum of the values created by individual efforts in isolation. This gives power to each MSE over the market, according to the RDT. The associated costs reduction, timely delivery, and complete order fulfillment improve the power imbalance between the MSE and the market, which improves gain in the transaction with the customer that results in profitability. According to the coopetition model of business interactions proposed by Robert *et al*. (2018), the coopetition strategy is based on a value-net framework proposal with competitors, complementors, and consumers as participants in the post-production activities. The RDT asserts that greater profit is generated on the customers' side of the business (market side), because even a minor change in

consumers may significantly alter the market's power balance and profitability (Brandenburger and Nalebuff, 1996). Competitors and complementors engage on this side of the business to enable each firm to acquire and better deploy resources in outbound logistics, notably transportation and warehousing, to gain market strength and achieve high performance.

Empirical Literature Review

MSEs in the handicrafts sector in developing nations have difficulties because of a lack of assistance from the government and business development service providers, inept staff, and competition from bigger businesses. This is evidenced in South Africa (Pereira *et al*. (2006) and in Tanzania (Kazungu *et al*. (2018b). It is hypothesized that Tanzania's MSEs' low profitability is made worse by their lack of influence in the handicrafts market, which is brought on by weak internal organisations and an ineffective mix of MSE resources and outside assistance (Mori, 2015). By strategically working with the rival over an extended period, MSE's market power is shown to increase (Mzomwe and Mutarubukwa, 2015; Cygler *et al*., 2018). The influence of intra-firm coopetition on profitability or the impact of inter-firm coopetition on profitability in the pre-production and production phases have been the main topics of research on coopetition and company performance (Bendig *et al*., 2018).

An individual firm's profitability may be negatively or favourably affected, according to previous studies (Cygler *et al*., 2018; Santamaria and Surroca, 2011). Mira *et al*. (2016) looked at the inter-firm competition in the French real estate market. The research employed full the (MLS} database and data analysed using the ordinary least squares regression (OLS) model. According to the findings, horizontal cooperation techniques had a beneficial effect on a company's product profitability in the market, and this effect was more noticeable in large enterprises than in SMEs. Inter-firm cooperation in German industries was studied by Fredrich *et al*. (2019) in the context of marketing and innovation (pre-production) performance. About 222 SMEs were chosen as the sample size from companies that took part in international trade exhibitions held in Germany in 2014 and 2015. They claimed that

coopetition among SMEs increased performance in profitability by achieving "synergy by pooling market share, sales, loyalty, or brand recognition versus other rivals in the market". Liberatore and Miller (2016) surveyed and quantitatively analysed data from 247 low-cost and low service provider businesses in the USA. This study discovered that handicraft companies' profitability was directly impacted by outbound logistics performance. Outbound logistics is mainly the total cost of transportation and storage. It should be carefully handled to achieve profitability. A study of the impact of logistics expenses on textile sector profitability in Da Nang, Vietnam, by Hoang and Nguyen (2018) has revealed a correlation between the financial performance of the company and the logistics service. The cost of logistics was one of the major elements affecting the company's profitability.

Firms may coopete to improve their performance at any point of the business cycle, according (Flanagan *et al*. (2018). Various studies have focused on coopetition in the pre-production and production phases of business technology-driven phase, and its influence on firm performance in entrepreneurial skills development and innovation, rather than coopetition in the post-production phase the market-oriented phase and its influence on firm profitability (Robert *et al*. 2018; Bacon *et al*., 2020; Pekovic *et al*., 2019). The importance of horizontal coopetition in enhancing a firm's profitability has been studied mostly in big businesses or comparisons of coopeting and non-coopeting enterprises (Lechner *et al*., 2016). Coopetition in SMEs in developing economies and specifically in handicrafts as a sector-specific industry is scantly researched. These SMEs have profitability problems throughout their life cycles due to their inability to access and effectively exploit existing resources, as well as their low market power due to their small size and newness in the industry (Argidius, 2017; Flanagan *et al*., 2018).

Research Gaps

Coopetition is a relatively novel notion in business, and its theoretical foundation is still in its initial stages (Gnyawali and Charleton, 2018; Cygler *et al*., 2018). Coopetition has not attracted much attention in Africa and other developing countries. According to Jámbor (2018), about 58% of coopetition studies were done in Europe, 24% in the United States, 17% in Asia, and less

than 2% in Australia and Africa. This study addressed this contextual gap by adding a coopetition study in Africa, particularly Tanzania. Most research on SME coopetition focused either on vertical coopetition (Lechner *et al*., 2016) or between asymmetric enterprises (Jakobsen, 2019). According to Lechner *et al*. (2016), there is a scarcity of study findings that explain the link between horizontal cooperation and SMEs' commercial profitability. Those few studies on horizontal coopetition focused on coopetition between medium and large firms (Bouncken *et al*., 2018), not in MSEs. Furthermore, in the extensive review of coopetition by Bouncken *et al*. (2015), coopetition in the handicraft industry was not given due attention as a sector-specific economic endeavour. This study also addressed these knowledge gaps by delving into the MSE in the handicraft industry to add knowledge to coopetition. Brekalo, Albers, and Delfmann (2013) have shown that studies in coopetition among SMEs in supply chain management have concentrated on activities in the pre-production and production phases, while there are insufficient studies on activities in the post-production phase concerning SMEs' performance. This research focused on post-production activities and the effect of duration of collaboration on profitability to address this knowledge gap.

Different studies in coopetition have never used the Theory of Coopetition (TOC) as the major theoretical framework in a study on coopetition and company profitability. The TOC evolved from the value proposition concept, which considered business as value creation and appropriation endeavours. Value creation was thought to occur away from consumers, whereas value appropriation, which was thought to occur closer to customers, happened during the post-production phase (Bengtsson and Kock, 2000; Brandenburger and Nalebuff, 1996). As a result, the value proposition theoretical approach positions competition and cooperation at distinct stages of the business process. This conclusion was one of the TOC's most serious flaws and was critiqued by Tidström and Rajala (2015), who claimed that striking the right balance between competition and cooperation in either phase can improve joint and firm performance. The validation of this theoretical approach mainly was carried out in medium and large companies in developed nations and none in MSEs in emerging economies and concentrated on pre-

production and production stages of business. The findings from this study add to the theory of coopetition by empirically validating the coopetition preposition reached by Bengtsson *et al*. (2016),Tidström and Rajala (2015), and Wu (2014) that competition and cooperation may occur even near to the customer during the value appropriation phase of business.

Study Hypotheses

In the literature review, Fredrich *et al*. (2019) noted that coopetition is one of the strategies in boosting SME's' profitability by achieving synergy of operations sharing without concentrating on particular aspects of operations and type of coopetition. It was also shown that there is a favourable association between horizontal coopetition in logistics operations and business financial performance, and logistics expenses are one of the most important elements affecting a firm's profitability (Hoang and Nguyen, 2018). Liberatore and Miller (2016) specify horizontal outbound logistics expenses and assert that the main components of outbound logistics which should be carefully controlled to achieve profitability are overall transportation and warehouse. This conclusion helped in the formulation of the first hypothesis (H_1) and the second hypothesis (H_2) for this study:

H_1: MSEs' horizontal coopetition in transportation positively influences their profitability.

H_2: MSEs' horizontal coopetition in the warehousing of goods positively influences their profitability.

As noted in theoretical development, resource interdependence as a variable in RDT is one of the antecedents and drivers of coopetition (Chai *et al*., 2019; Fredrich *et al*., 2019). According to Chai *et al*. (2019), interfirm interdependence in resources has a favourable impact on the amount of interfirm cooperation. Resource interdependence is thought of having a moderating effect on coopetition because coopetition turns out to be more cooperative if the firms' resources leverage power among the firms. This prompted to have hypotheses H_3 and H_4 as follows:

H_3: The level of influence of MSEs' horizontal coopetition in transportation on their profitability is positively moderated by the resource's interdependence among them.

H_4: The level of influence of MSEs' horizontal coopetition in the warehousing of goods on their profitability is positively moderated by the resource's interdependence among them.

Methodology

This study targeted the MSEs in the handicraft industry in Arusha city, Tanzania. The city centre was purposefully selected for this study since it had the highest density of handicrafts markets compared to the areas along the tourism routes. Respondents were the owners of the MSEs spread in three clusters, namely the Open 'Markets', Curio Shops, or tourist hotels' Duty-Free Shops (Synovate, 2012).While clusters are the categorisation of the enterprises according to the place and mode of operation, the markets were places where MSEs conglomerated and made business together. The study was conducted in the Arusha city centre where the sampling frame consisted of 45 registered handicrafts markets with a total of 297 MSEs (Table 1).

Table 1: Handicraft Markets in Arusha City Centre

Cluster Type	**Cluster 1** ***Open 'Markets'***	**Cluster 2** ***Curio Shops***	**Cluster 3** ***Hotels Duty-Free Shops***	**Total**
Number of Mkts	13	22	10	45
Number of MSEs	94	143	60	297

Source: CHAMASATA (2019)

The targeted sample size was computed by the Yamane formula (Uakarn *et al*., 2021) to be 175 MSEs, and the actual respondents were enterprise owners of 159 MSEs (91% response rate). These MSEs were exclusively selling either home décors only, fashion accessories only, or both home décors and fashion accessories to either local market only, the export market only or both local and export markets. A quantitative, cross-sectional survey approach was used in this research. The four independent variables were horizontal coopetition in transportation, warehousing, generic advertising,

and duration of collaboration, while the dependent variable was the profitability of the MSE. The structured questionnaire was the main instrument used in the survey and various questions for the independent variables were adopted from similar surveys (Anil Vashisht, 2013; Bengtsson and Kock, 2014; Bouncken *et al*., 2015; Flanagan *et al*., 2018;Hoang and Nguyen, 2018; Jakobsen, 2019;Abiodun, 2011; and Jørgensen and Sigué, 2015). The questions for the dependent variable were adopted from similar surveys (Anil Vashisht, 2013; Ritala, 2012; Tulsian, 2014; and Yazdanfar and Öhman, 2015).

The study used questionnaire to collect data for the study.

Descriptive statistics were employed to summarize the characteristics of a data set. The MSE sizes and distribution were analysed. The handicraft markets' distribution by clusters, the goods categories distribution by both clusters and markets, and the market served were analysed. The levels of coopetition in transportation and warehousing as well as the levels of profitability were *No*, *Low*, *Moderate*, *High*, and *Very High*; and were measured on the 5-point Likert scale, 5 being the *Very High* level. Inferential statistics were used to test the hypotheses and assess the generalization of the results. Here, the multiple linear regression (MLR) analysis models that had the following general structures were used:

Additive Model:

$$Y = \square_0 + \square_1.X_1 + \square_2.X_2 \square\square \ldots\ldots\ldots\ldots (1)$$

Moderated Model:

$$Y = \square_0 + \square_1.X_1 + \square_2.X_2 + \square_3.M + \sum\square_i X_i M \ldots\ldots\ldots\ldots (2)$$

Where:

Y - The dependent variable – Profitability.

X_i– The independent variables: (X_1 = Transportation, X_2 = Warehousing)

M- The moderator (Resource interdependence)

$\square_1$, $\square_2$and $\square_3$-The regression coefficients measuring changes in the dependent variable, Y, with a unit change in independent variables X_1, X_2, and M respectively.

$\square_i$– The regression coefficients measuring changes in the product terms for Moderator and the independent variables

$\square_0$ - The Profitability when coopetition is zero.

Source: Mira *et al*., (2016); Wineaster, (2017).

Then MLR assumptions were checked before the hypotheses testing. These assumptions were linearity of the independent variables, the normality of variable distributions of residues, multicollinearity of independent variables, and homoscedasticity of the variances of error terms. The purpose of the linearity assessment was to determine whether the dependent variable and any individual independent variable, as well as all independent variables taken together, were related linearly since violation of this assumption could cause the findings of regression analysis to underestimate or overstate the actual connection between the variables. The results in Table 2 indicate that the assumption is not violated as the regression coefficient and correlation values were statistically significant

Table 2: Linearity Assumption Test

		Correlation Coefficient	Sig.	Constant	Beta Value (IV Coefficient)	Sig.
1	TranspX_1	.587	.001	+1.618	+0.588	.001
2	WhX_2	.688	.001	+1.490	+0.690	.001

A normality test was done to ascertain whether or not the residuals of the regression or the errors between observed and predicted values were normally distributed. The numerical values of the Kolmogorov-Smirnov goodness of fit test (sig. value test) were performed. From Table 3, the Kolmogorov-Smirnov goodness of fit test (sig. value test) is .004. This indicated that the data were normally distributed.

Table 3: Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Unstandardized Residual	.088	159	.004	.977	159	.008

a. Lilliefors Significance Correction

Multicollinearity assumption was also checked. Multicollinearity exists when two or more independent variables in the regression model are highly

correlated. The test was run to assess the Collinearity Statistics; namely, the Variance Inflation Factor (VIF). The VIF measures how much multicollinearity has increased an estimated coefficient's variance. It examines the degree to which each independent variable in the equation can be explained by each other. The decision criterion is that there is a severe multicollinearity if VIF >5 for independent variables(Studenmund, 2014). The results in Table 4 indicate that VIF across the independent variables are less than 5, and p = .001.

Table 4: Coefficients[a] and Collinearity Statistics

	Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
Model	B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1 (Constant)	-0.097	.242		-.403	.687		
$TranspX_1$	0.230	.054	0.253	4.231	.000	.658	1.519
WhX_2	0.245	.058	0.290	4.232	.000	.501	1.997

[a]Dependent Variable: Profitability of the MSE

The homoscedasticity of the variances of error terms means the equality of the variances of error terms across the values of the independent variables. Homoscedasticity was tested by plotting the standardized values that the model would predict against the standardized residual value obtained and assessing its scatter plot of the dots along the x-axis. The resulting scatterplot displayed in Figure 1 shows an almost homogeneous distribution of Standardized Residual between +2 and -2, indicating that the assumption was not violated.

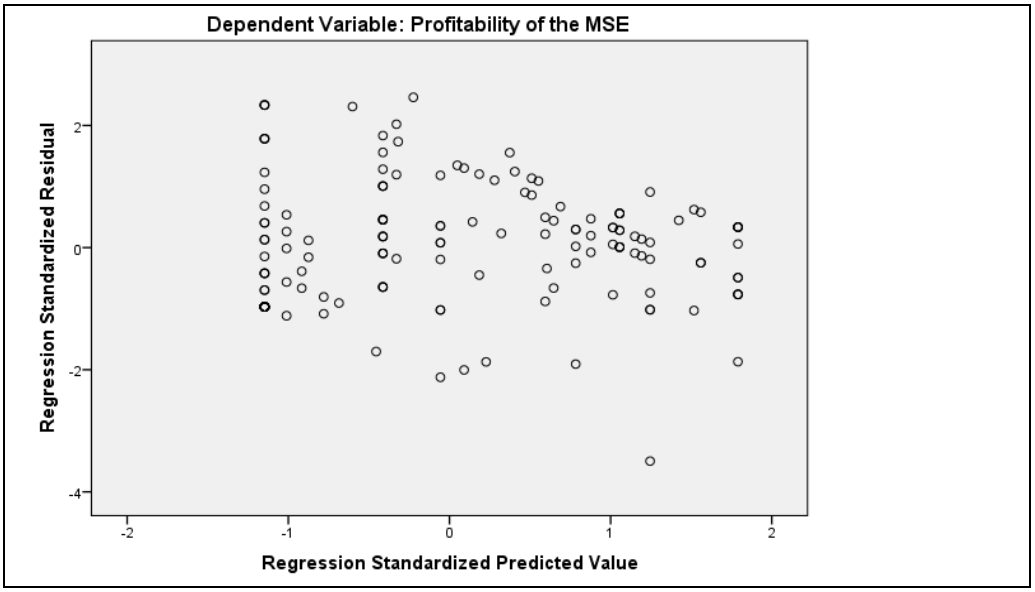

Figure 1: Regression Standardized Residual on Regression Standardized Predicted values

Centred interactive variables were used to eliminate any possible multicollinearity caused by the primary independent and interaction variables, so the variables TranspX_1, WhX_2, ResM,TranspX_1*ResM and WhX_2*ResM were all centred. After centring the variables, the hierarchical regression model was used to test the moderation effect. The hierarchical regression analysis is effective when working with independent variables and a potential moderating variable. According to Lei *et al*. (2020), when using hierarchical regression, individual attributes of the independent variables and aggregate-level features are both included in a model technique. Lewis, (2007) asserts that in hierarchical multiple regression analysis, the addition of the independent variable at the initial stage is simultaneous in all independent variables followed by the loading of the moderating variable. The hierarchical regression analysis of ProftY on centred WhX_2, centred TranspX_1, centred ResM, and the centred products of ResMand independent variables (TranspX1 and WhX2) was then performed.

Results

Validity and Reliability of the Survey Instrument

The validity of the survey instrument was checked using the Pearson product-moment correlation by checking the significance values compared with the significance value, p = .05 and comparing it with the r-value from the r-value tables in Bart *et al*. (2012)and Pearson (2019). The decision criterion is that if the r-value for the sample is greater than the critical value for a given sample size, significance level, and degree of freedom, then the test questions in the instrument were valid (SPSS, 2022). The inspection of Pearson product-moment correlation and p-values was done to either retain the valid questions or remove the invalid questions in the questionnaire. According to the critical value table for r-tables product-moment (Bart *et al*., 2012), the value was r = .159 (N = 159, p = .05). In the analysis, all the Pearson product-moment correlation, except for two questions, exhibited values greater than 0.159 showing that the validity was significant. The two questions were: "What is the major category of goods sold in the business?" and "The business is in high competition with other similar businesses" where Pearson Correlations are low and, in both cases, p >.05. To check the reliability of all the constructs across all the questions that were administered to the respondents, Cronbach's Alpha coefficient was used. It is regarded as a coefficient for the reliability scale, and the internal consistence is considered good if the Cronbach's Alpha value is greater than 0.70 (Tavakol and Dennick, 2011). According to Cronbach's Alpha, if Item Deleted is depicted in Table 2 and all the values are above 0.70 it shows that the internal consistence is very high.

Table 5: Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
COOP_11	19.89	80.615	.498	.477	.905
COOP_12	19.33	72.869	.730	.708	.885
COOP_13	19.57	72.778	.750	.787	.883
COOP_14	19.64	73.423	.770	.822	.881
COOP_18	18.93	71.445	.755	.652	.882
COOP_19	19.58	74.929	.735	.611	.885
COOP_20	18.72	76.369	.653	.501	.892
COOP_21	19.53	78.137	.618	.459	.895

How closely linked a group of objects are to one another is determined by Cronbach's Alpha, a measure of internal consistency. The analysis shows that Cronbach's alpha (□) = .901 and the Cronbach's Alpha Based on Standardized Items (□*) = .900 (Table 3), indicating that the reliability is very high.

Table 6: Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.901	.900	8

Descriptive Statistical Analysis

The analysis revealed that no enterprise in handicrafts in the study area had more than 35 employees while the majority of them (about 79%) had at most 5 employees. Since all the enterprises had less than 50 employees, they all qualified to be MSEs (Mzomwe and Mutarubukwa, 2015). The handcraft/curio shops cluster had the largest number of handicrafts MSEs occupying 47.2% (about half) of all handicraft businesses, followed by the open markets cluster (30.2%). About 62% of all MSEs studied had mixed merchandise where they were selling both home décor and fashion accessories, with less than 20% of MSEs specializing in either home décor only or fashion accessories only. The study also revealed that about 57.2% of all MSEs were specialising in the domestic market only without exporting and about 39% were serving both the domestic and the export markets. The percentage of MSEs specializing in the export market was very low i.e. about 4 percent. When the associations of MSE characteristics in the sample were computed, it was observed that most (about 62.3%) of the MSEs were dealing with a combined business of home décor and fashion accessories. It was also evident that 51.6% and 35.2% of MSEs in open markets and handcraft/curio shops clusters respectively sold products in the domestic market, whereas the major cluster that sold handcrafts in the export market was the art centre duty-free shops (about 83.3% of MSEs). The analysis also showed that about 58.6% and 61.3% of all MSEs sold home décor products only and fashion accessories only respectively in the domestic markets, whereas about 37.9% and 35.5% of all MSEs sold home décor only and fashion accessories only respectively in both domestic and export markets.

About 40.4% of all MSEs that served both the domestic and export markets sold both home décor and fashion accessories. The independent and dependent variables were cross-tabulated, and it was observed that about 36.5% of all MSEs were involved in coopetition but the profitability was not noticeable, 35.2% of all MSEs that had low to high coopetition achieved moderate to high profitability, and 27% of all MSEs that had moderate to very high coopetition achieved high to very high profitability.

Coopetition in Transportation (TranspX1) and different Attributes of the MSEs

The investigation of the MSE'sTranspX$_1$ and the cluster types showed that within the cluster, 55.6%, 49.3%, and 22.9% of MSEs in Art Centre/Duty-Free shops, handcraft/Curio shops, and Open Markets respectively were coopeting in the transportation. The examinationofTranspX$_1$and the market served indicates that as low as 1.9% and 18.2%of all MSEs coopeted in the export and the local markets. When analysing the TranspX$_1$ and the MSE size, it was clear that TranspX$_1$increased with the increased sizes of MSEs. Goods sold in the market were categorised into home décors and fashion accessories categories. The analysis of TranspX$_1$and the goods that were sold to the market shows that only 16.2% of all MSEs that sold fashion accessories only adopted coopetition as a strategy.

Coopetition in Warehousing (WhX$_2$) and different Attributes of the MSEs

The descriptive analysis onWhX$_2$and the MSE categories showed that the coopetition to achieve profitability increased with the increased MSE sizes. It was shown, however, that the open markets cluster had a very low coopetitive tendency than the other clusters. The MSEs that merchandized home décor only and were moderately to very highly coopetitive were 48.2%, while those that traded fashion accessories only were 16.2%.It was clear also that the MSEs serving the domestic market were not coopetitive in warehousing, while in the export market only category, about 83.4% of the MSEs had either high or very high coopetition in warehousing.

Inferential Statistical Analysis

Coopetition in Transportation (TranspX_1) and Profitability (ProftY)

When the MLR analysis of ProftYon TranspX_1 and WhX_2 was performed. Loading was done simultaneouslyand the results are in Table 4 and Table 5.

Table 7: Coefficients[a]

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	1.618	.172		9.399	.000
	TranspX1	.533	.059	.588	9.099	.000
2	(Constant)	1.178	.157		7.521	.000
	TranspX1	.261	.061	.288	4.305	.000
	WhX2	.442	.056	.524	7.835	.000

a. Dependent Variable: ProftY

Table 8: Model Summary[b]: TranspX_1 then WhX_2

Model	R	R^2	Adjusted R^2	Std. Error of the Estimate	Change Statistics R^2 Change	F Change	df1	df2	Sig. F Change
1	.588[a]	.345	.341	1.068	.345	82.798	1	157	.000
2	.728[b]	.530	.524	.907	.185	61.395	1	156	.000

a. Predictors: (Constant), Coopetition in Transportation

b. Predictors: (Constant), Coopetition in Transportation, Coopetition in Warehousing

c. Dependent Variable: Profitability of the MSE

Table 9: Model Summary[c]: WhX_2 then TranspX_1

Model	R	R^2	Adjusted R^2	Std. Error of the Estimate	Change Statistics R^2 Change	F Change	df1	df2	Sig. F Change
1	.689[a]	.474	.471	.957	.474	141.690	1	157	.000
2	.728[b]	.530	.524	.907	.056	18.531	1	156	.000

a. Predictors: (Constant), Coopetition in Warehousing

b. Predictors: (Constant), Coopetition in Warehousing, Coopetition in Transportation c. Dependent Variable: Profitability of the MSE

The Moderator (ResM) on the Influence of TransX1 and WhX_2on Profitability (ProftY)

The moderated MLR analysis of ProftY on $TranspX_1$ and WhX_2 was performed. Loading was done stepwise with centred TranspX1, centred WhX2 and centred M (Moderator) were loaded simultaneously and then, the products of the centred moderator and the centred IVs. The results for the moderated model are displayedin Table 7and Table 8.

Table 10: Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	2.981	.076		39.288	.000
	CenteredX2	.581	.049	.689	11.903	.000
2	(Constant)	2.981	.072		41.423	.000
	CenteredX2	.442	.056	.524	7.835	.000
	CenteredX1	.261	.061	.288	4.305	.000
3	(Constant)	2.976	.073		41.008	.000
	CenteredX2	.443	.057	.525	7.776	.000
	CenteredX1	.262	.061	.288	4.285	.000
	CenteredM	.044	.159	.015	.276	.783
	CenteredX1_CenteredM	-.110	.146	-.057	-.755	.451
	CenteredX2_CenteredM	-.026	.137	-.014	-.189	.850

a. Dependent Variable: Profitability of the MSE

Table 11: Model Summary

				Std.		Change Statistics			
Model	R	R Square	Adjusted R Square	Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change
1	.689[a]	.474	.471	.957	.474	141.690	1	157	.000
2	.728[b]	.530	.524	.907	.056	18.531	1	156	.000
3	.731[c]	.535	.522	.909	.004	.726	2	154	.485

a. Predictors: (Constant), CenteredX2
b. Predictors: (Constant), CenteredX2, CenteredX1
c. Predictors: (Constant), CenteredX2, CenteredX1, CenteredX1_CenteredM, CenteredX2_CenteredM

In Table 7, the standardized coefficient for the moderating variable (CenteredM) was .015 ($p > .05$) while those for CenteredX1*CenteredM and CenteredX2*CenteredM were -.057 and -.014 respective, and their p values were $p > .05$.

In Table 8, the R^2 change was .004 ($F_{change}(2,154) = .726$, $p > .05$).

Discussion

The objectives of this study were to assess the influence of horizontal coopetition in transportation and warehousing on the profitability of an MSE in handicraft and to assess the moderating effect of resource interdependence on coopetition's influence. Descriptive analysis indicated that most MSEs were micro enterprises most of which were clustered in handcraft/curio shops and open markets. The results are in agreement with Kazungu (2020), Mzomwe and Mutarubukwa (2015), and Synovate (2012)findings. The handicraft MSE trade concentrated in the local market with very few MSEs, mostly in the art centre duty-free shops cluster, specialized in the export market. These findings are in line with Kazungu (2020) findings on Tanzania's handicraft MSEs' operation in the export market. The study indicated also that almost all the MSEs that were involved in the export market coopeted in both transportation and warehousing and the profitability was noticeable.

The Influence of Horizontal MSEs' Coopetition in Transportation (TranspX1) on MSE's Profitability (ProftY), Hypothesis H_1

The study indicates that most MSEs had moderate to very high coopetition propensity in transporting goods, which agrees with the results reached by Galbreath *et al*. (2022). In the context of handicrafts MSEs studied, the coopetition was more pronounced in the export market than the local market. The MSEs that were exporting home décor only were more coopetitive in transportation than those exporting fashion accessories only. and the larger the MSEs, the more they were inclined to coopete. Although Galbreath *et al*. (2022) argue that collaborative transportation has marginal benefits to the SMEs in the economic context, inferential statistical analysis was to check if empirical evidence exists that the benefits include profitability. Therefore, the hypothesis tested was:

H_1: Horizontal MSEs'coopetition in transportation positively influences the MSE's profitability.

Results in Table 4 and Table 5showed that the regression equation was:

$$ProftY = 1.618 + .288TranspX_1.$$

It is conclusive that Profitability (ProftY) increased by 0.288 units for each unit increase in coopetition in transportation (TranspX*1*), and the effect is statistically significant ($p < .001$).

The adjusted $R^2 = .341$, $F(1,157) = 82.798$, $p < .001$

If other variables are kept constant, 34.1% of the variance in profitability can be accounted for by horizontal coopetition in transportation of goods to the market, and the effect was statistically significant. These results agree with Galbreath *et al*. (2022) who noted that collaboration in transportation has the benefits in costs saving, improving efficiency, expansion of the market reach and may minimize administrative time spent on product shipment orders. These eventually increase the profitability of the firm. It is conclusive that Horizontal MSEs'coopetition in transportation positively influences the MSE's profitability, and hypothesis *H_1* is accepted.

The Influence of Horizontal MSEs' Coopetition in the Warehousing of Goods (WhX_2) on MSE's Profitability (ProftY), Hypothesis H_2

The analysis of the coopetition in warehousing (WhX_2) within the clusters revealed that the open markets cluster has a very high tendency not to coopete as about 79.2% of all MSEs in that cluster had no coopetition in warehousing while about 88.9% of all MSEs in the Art Centre/Duty-Free Shops cluster had very high levels of coopetition. Dhewanto *et al*. (2018) observed that warehousing decision is more pronounced in the export market than in local market. Since Art Centre/Duty-Free Shops cluster are more inclined to export than the open markets cluster, this empirical observation is consistent with other observations. It was shown also about 65.1% of all MSEs in the category of micro-enterprises had no or low coopetition in warehousing. Coopetition in warehousing was more pronounced in sales of home décors where the MSEs that merchandized home décors only and were coopeting moderately to very highly were 48.2%. It was shown that 57.1% of the MSEs serving the domestic market were not coopeting in the warehousing of goods to the customers.

Literature review indicated that most collaborative warehousing was done in the demand side of the value chain, especially in on-time securing of the raw materials and equipment (Zimon, 2020; Yumna *et al*., 2020). According to Zimon (2020), the central warehouse has a favourable influence on the financial stability of SMEs that participate in group purchasing groups. The utilization of a central warehouse optimizes the most expensive component inventory. This is supported by improved inventory turnover ratios in days, a lower percentage of inventories in the structure of current assets, and financial liquidity ratio optimization. Available studies on collaborative warehousing among the SMEs in the supply-side of the value chain show that the SME suppliers can use coopetition to capitalize on existing business possibilities and leverage spare capacity, boosting product availability and lowering prices (Kazantsev *et al*., 2018). Studies in perishable goods for export show that collaborative warehouse management improve customer service and the capacity to deliver items efficiently and on schedule(Al-Sharif and Hamas, 2021). This study was focused to investigate how the

horizontal coopetition influences profitability of MSEs in handicrafts. So, the inferential statistical analysis was used to test the hypothesis that:

> *H_2: Horizontal MSEs'coopetition in the warehousing of goods positively influences the MSE's profitability.*

Results in Table 4 and Table 6 showed that the regression equation was:

ProftY = 1.178+ .524Wh$X_2$and

The Adjusted, R^2 =.471, F(1,157) = 141.690, p < .001

The regression analysis shows that the profitability increased 0.524 units for each unit increase in coopetition in warehousing, and the effect is statistically significant (p < .001).The correlation analysis indicates that if other variables are kept constant, 47.1% of the variance in profitability can be accounted for by coopetition in warehouse; and the influence is statistically significant (p < .001). The results agree with observation by Kazantsev *et al*. (2018) that SMEs collaborative warehousing can leverage in lowering prices, optimizing the capacities and improve the profitability. It is conclusive that Horizontal MSEs' coopetition in warehousing positively influences the MSE's profitability, and hypothesis H_2 is accepted.

When taken together, the MLR indicated that

ProftY = *1.618+.288TranspX_1+.524WhX_2*……. (1)

The moderation effect of resource interdependence among MSEs on the influences of Coopetition on Transportation on Profitability (Hypotheses H_3) and Coopetition on Warehousing on Profitability (Hypotheses H_4)
The hierarchical regression was used to find out if the centredResM was statistically significant in changing the regression coefficient of ProftY on Transp$X_1$and correlation coefficient of ProftY and TranspX_1. The hypothesis tested was:

> *H_3: The level of influence of Horizontal MSEs' coopetition in transportation on the MSE's profitability is significantly moderated by the resource's interdependence among MSEs.*

To test this hypothesis, the moderated regression and correlations analyses were performed and the coefficients were checked between ProftY, TranspX_1, and ResM. The interaction impact of the moderation term on the regression coefficients was not statistically significant (p >.05) in the

regression analysis of Proft Y on centred Transp X_1, centred ResM, and centred TranspX1*centred ResM (Table 7). The correlation coefficient between Proft Y and Transp$X_1$was positive, strong and statistically significant whereas the rest of the correlations were weak, negative and not statistically significant. The R^2 change was only .004, and the effect is not significant (p >.05) (Table 8). Again, hierarchical regression analysis of Profitability (ProftY) on centred WhX_2, ResM, and X_2*ResM was done to check how the centred ResM was statistically significant in changing the correlation coefficient of determination (R^2 Change) of Proft Y and WhX2. The hypothesis tested was:

> *H_4: The level of influence of Horizontal MSEs' coopetition in the warehousing of goods on the MSE's profitability is significantly moderated by the resource's interdependence among MSEs.*

To test this hypothesis, the moderated regression and correlations analyses were performed and the coefficients were checked between Proft Y, WhX_2, and ResM. The interaction impact of the moderation term on the regression coefficients was not statistically significant (p >.05) in the regression analysis of ProftY on centred WhX_2, centred ResM, and centred WhX_2*centred ResM (Table 7). The correlation coefficient between ProftY and WhX2 was positive, strong and statistically significant whereas the rest of the correlations were weak, negative and statistically not significant. Table 8 indicated that after the introduction of the interactive term, the value of R^2 change was only 0.004, and the effect was not statistically significant (p > .05). The influence of both horizontal coopetition in transportation and warehouse on the profitability of MSEs in handicraft industry was thought to be moderated by the resource interdependence among the MSEs. Fredrich *et al*. (2019) asserts that highly interdependent enterprises can gain a competitive advantage by sustain cooperation and improving economic performance. Extant studies (Gadde *et al*., 2003; Ritala and Hurmelinna-Laukkanen, 2009) indicate that resource interdependence implies that the firm controls limited resources with imperfect information. This process can moderate the effect of pooled resources on economic success. The results from this study have shown otherwise. Hypothesis H_3 and H_4arerejected.

The Influence of Coopetition in Outbound Logistics (TranspX_1 and WhX_2) on the Profitability (ProftY) before and after Moderation

From Table 7, the Moderated MLR was analysed to predict ProftY based on centred TranspX_1 and centred WhX_2. The R^2 change was .004 and it was not

statistically significant (p > .05). It was found that Fchange (2,154) = .726 and p> .05) (Table 8), and the model fit based on standardized coefficients(Table 7) was:

$ProftY = 2.976 + .288TranspX_1 + .525WhX_2 + .015ResM - .057X_1*ResM - .014X_2*ResM$……(2)

Table 9 compares the coefficient of the independent variables before and after the moderation. After the moderation, the ProftY drops by 9% and 15% for every unit increase in $TranspX_1$ and WhX_2respectively, and according to Table 7, the Moderator's influence was not statistically significant (p > .05).

Table 12: Independent Variables' Coefficients before and after Moderation

	Coefficient for $TranspX_1$□□□□□	Coefficient for WhX_2□□□□
Before Moderation	.288	.524
After Moderation	.262	.443
Percentage Change	9%	15%

Conclusion and Recommendations for Further Studies

Conclusion

This study intended to understand the horizontal coopetition of handicraft MSEs in the post-production phase of business where coopetition in outbound logistics, specifically in transportation and warehousing, was hypothesized to influence profitability. The results from this study validated the conclusion reached by Bengtsson and Kock (2014) and Tidström and Rajala (2015) that proper management and balance between competition and cooperation in either phase of business (pre-production, production, and post-production) has the potential to achieve higher performances in profitability. The MLR model used had transportation and warehousing as independent variables and profitability as the dependent variable. Regression analysis of profitability on transportation and warehousing showed that there was a positive and significant increase in MSE's profitability. The model showed that about 62.8% of the enterprise's profitability could be explained by horizontal coopetition in transportation and warehousing alone. Within the scope of this research, it can be concluded that horizontal coopetition in

transportation and warehousing has a significant and positive influence on the profitability of MSEs. It was also hypothesized that the resource interdependence between the coopeting MSEs would significantly moderate the horizontal coopetition's influence on profitability. The study has shown that the impact was not statistically significant since resource interdependence accounted for only 0.2% of the variation in profitability while the regression analysis indicated that the moderator did not significantly change the influence of independent variables on profitability.

Limitation

The analysis showed that the horizontal coopetition in outbound logistics was also influenced by MSE attributes like the cluster type, the product type, the markets served, the firm size, and the age of the firm. These attributes were not factored-in when doing the influence of the horizontal coopetition in outbound logistics on profitability. Again, the study had contextual limitations in that the MSEs were sampled in the handicraft markets clustered in the Arusha city centre. The urban nature of the business may have an effect on the nature of coopetition among the MSEs. Data were collected during the time the world was in the COVID-19 pandemic and this might influence the results from the respondent. Many businesses were not in operation as the main customers were foreign tourists; and the export market was declining due to severe lockdownsin Europe, Asia, and the US.

Recommendations

Horizontal coopetition in outbound logistics increases the ability of each MSE to deliver value to the customer through the reduction of downstream costs. Since the results from this study suggest that horizontal coopetition in outbound logistics is a profitable model, it is recommended that MSEs proprietors should be made to consider the value proposition of the coopetition built-in in the value-net framework and exploit it. MSE owners should be made aware to focus on the customers' needs and to consider other similar MSEs as complementors, co-value creators, and appropriators. Since it's shown that resource interdependence does not moderate the coopetition in the efforts to create appropriate value in coopetition, managers should be made not to fear cooperating effectively with rivals in a business

environment. This study paves the way to a better understanding of the coopetition dynamics in the post-production phase of the company and the company's performance. Further studies are recommended on the relationship between horizontal coopetition in other outbound logistics activities like inventory management and distribution channels, and MSEs' performance. The empirical results from this study help to develop a framework to define the effects of post-production coopetition on MSE profitability. Using the coopetition theory and the resource dependency theory, these empirical findings provide a foundation for furthering research in post-production coopetition. Since it was shown that coopetition in outbound logistics was also influenced by MSE attributes, more research is needed in this area of factors influencing the degree of cooperation. Again, the context of this study was limited to one city in one developing country with the assumption that it can be inferred to other cities and developing counties. It is recommended that more empirical data from industry-specific cases, and in other environmental settings, be done to vindicate what is generated in this study since it will add more understanding and knowledge to the coopetition theory.

REFERENCES

Abiodun, A. O. (2011). The impact of advertising on sales volume of a product. In *Hamk* (Issue December). Hamk University of Applied Science.

Al-Sharif, D., & Hamas, Y. (2021). Online SMEs warehouse management: Challenges and opportunities. *PalArch's Journal of Archaeology of Egypt / Egyptology*, *18*(15), 17–26.

Anil Vashisht. (2013). *Questionnaire: research study for supply chain management in organized retailing - subject information sheet*. Thesis. https://shodhganga.inflibnet.ac.in/bitstream/10603/132570/13/13_questionnaires.pdf

Argidius. (2017). *The Entrepreneurship and Enterprise Growth Landscape, Tanzania*. https://www.argidius.com/wp-content/uploads/ 2015/03/ Tanzania _Mapping.pdf

Bacon, E., Williams, M. D., & Davies, G. (2020). Coopetition in innovation ecosystems: a comparative analysis of knowledge transfer configurations. *Journal of Business Research*, *115*(June), 307–316. https:// doi.org/10.1016/j.jbusres.2019.11.005

Bart L. Weathington, Unningham, C. J. L., & Pittenger, D. J. (2012). Appendix B: Statistical Test. In *Understanding business research* (pp. 81435–483). John Wiley & Sons, Inc. https://doi.org/10. 1002/971 18342978

Bendig, D., Enke, S., Thieme, N., & Brettel, M. (2018). Performance implications of cross-functional coopetition in new product development: the mediating role of organisational learning. *Industrial Marketing Management*, *73*(February), 137–153. https://doi.org/ 10.101 6/j. indmarman.2018.02.007

Bengtsson, M., & Kock, S. (2000). "Coopetition" in business networks - to cooperate and compete simultaneously. *Industrial Marketing Management*, *29*(5), 411–426. https://doi.org/10.1016/S0019-8501(99) 00067-X

Bengtsson, M., & Kock, S. (2014). Coopetition- Quo Vadis? Past accomplishments and future challenges. *Industrial Marketing Management*, *43*(2), 180–188. https://doi.org/10 .1016/j.indmar man. 201 4 .02.015

Bengtsson, M., & Raza-ullah, T. (2017). Paradox at an inter-firm level: A coopetition lens. In W. K. Smith, Marianne W. Lewis, P. Jarzabkowski, & A. Langley (Eds.), *The Oxford Handbook of Organisational Paradox* (Issue September). Oxford University Press. https://doi.org/ 10.1093/ oxfordhb/ 9780198754428.013.16

Bengtsson, M., Raza-Ullah, T., & Vanyushyn, V. (2016). The coopetition paradox and tension: the moderating role of coopetition capability. *Industrial Marketing Management*, *53*, 19–30. https://doi.org/ 10.1016/ j.indmarman.2015.11.008

Bouncken, R., Fredrich, V., Ritala, P., & Kraus, S. (2018). Coopetition in new product development alliances: advantages and tensions for incremental and radical innovation. *British Journal of Management*, *29*(3), 391–410. https://doi.org/10.1111/1467-8551.12213

Bouncken, R., Gast, J., Kraus, S., & Bogers, M. (2015). Coopetition: a systematic review, synthesis, and future research directions. *Review of Managerial Science*, *9*(3), 577–601. https://doi.org/10.1007/s11846-015- 0168-6

Brandenburger, A., & Nalebuff, B. (1996). *Co-opetition*. Bantam Doubleday Publishing Group, Inc. https://tajuanatidwe llhens.files. wordpress. com/2017/05/co-opetition-by-adam-m-brandenburger-barry-j-nalebu ff. pdf

Brekalo, L., Albers, S., & Delfmann, W. (2013). Logistics alliance management capabilities: where are they? *International Journal of Physical Distribution and Logistics Management*, *43*(7), 529–543. https:/ /doi.org/10.1108/IJPDLM-06-2012-0194

Casciaro, T., & Piskorski, M. J. (2005). Power imbalance, mutual dependence, and constraint absorption: a closer look at resource dependence theory. *Administrative Science Quarterly*,*50*(June), 167–199. https://www.jstor.org/stable/30037190

Chai, L., Li, J., Clauss, T., & Tangpong, C. (2019). The influences of interdependence, opportunism and technology uncertainty on interfirm coopetition. *Journal of Business and Industrial Marketing*, *34*(5), 948–964. https://doi.org/10.1108/JBIM-07-2018-0208

Chandra, A., Paul, J., & Chavan, M. (2020). Internationalization barriers of SMEs from developing countries: a review and research agenda. *International Journal of Entrepreneurial Behaviour and Research*, *26*(6), 1281–1310. https://doi.org/10.1108/IJEBR-03-2020-0167

Chen, X., Wang, X., & Xia, Y. (2019). Production coopetition strategies for competing manufacturers that produce partially substitutable products. *Production and Operations Management*, *28*(6), 1446–1464. https://doi. org/10.1111/poms.12998

Chiambaretto, P., & Fernandez, A. S. (2016). The evolution of coopetitive and collaborative alliances in an alliance portfolio: the Air France case. *Industrial Marketing Management*, *57*(July), 75–85. https://doi.org/ 10.1016/j. indmarman.2016.05.005

Creswell, J. W. (2016). Research design: qualitative, quantitative, and mixed methods approached. In V. Knight, J. Young, K. Koscielak, B. Bauhaus, & Megan Markanich (Eds.), *SAGE Publications, Inc.* (4th ed.). SAGE Publications, Inc. https://www.pdfdrive.com/qualitative-quantitative-and-mixed-methods-approaches-e91943566.html

Cygler, J., Sroka, W., Solesvik, M., & D˛ebkowska, K. (2018). Benefits and drawbacks of coopetition : The roles of scope and durability in coopetitive relationships. *Sustainability*, *10*(2688), 1–24. https:// doi.org/10.3390/su10082688

Cygler, J., Sroka, W., Solesvik, M., & Dębkowska, K. (2018). Benefits and drawbacks of coopetition: the roles of scope and durability in coopetitive relationships. *Sustainability (Switzerland)*, *10*(8), 1–24. https://doi.org/10.3390/su10082688

Czakon, W., Niemand, T., Gast, J., Kraus, S., & Frühstück, L. (2020). Designing coopetition for radical innovation: an experimental study of managers' preferences for developing self-driving electric cars. *Technological Forecasting and Social Change*, *155*(March), 119992. https://doi.org/10.1016/j.techfore.2020.119992

Dar, M., Ahmed, S., & Raziq, A. (2017). Small and medium-size enterprises in Pakistan: definition and critical issues. In *Pakistan Business Review* (Issue April 2017). http://journals.iobmresearch. com/index.php /PBR/ article/view/1245

Davis, G. F., & Cobb, J. A. (2009). Resource dependence theory : past and future. *Research in the Sociology of Organisations*, 1–31.

Dhewanto, W., Herliana, S., Lantu, D. C., & Lawiyah, N. (2018). Internal factors that affect SMEs to export: A case study of footwear cluster. *MATEC Web of Conferences*, *215*, 1–5. https://doi.org/10.1051/ matecconf/ 201821502007

Feela, T. (2020). Effects of coopetition on firm performance and implications for economic growth for SADC countries. *Open Journal of Business and Management*, *8*, 1439–1457. https://doi.org/10. 4236/ojbm. 2020. 84092

Flanagan, D. J., Lepisto, D. A., & Ofstein, L. F. (2018). Coopetition among nascent craft breweries: a value chain analysis. *Journal of Small Business and Enterprise Development*, *25*(1), 2–16. https://doi.org/ 10.1108/ JSBED-05-2017-0173

Frączkiewicz-Wronka, A., & Szymaniec, K. (2012). Resource based view and resource dependence theory in decision making process of public organisation - research findings. *Management*, *16*(2), 16–29. https://doi.org/10.2478/v10286-012-0052-2

Fredrich, V., Bouncken, R. B., & Kraus, S. (2019). The race is on: Configurations of absorptive capacity, interdependence and slack resources for interorganisational learning in coopetition alliances. *Journal of Business Research, 101*(November), 862–868. https:// doi.org/10.1016/j.jbusres.2018.11.038

Gadde, L. E., Huemer, L., & Håkansson, H. (2003). Strategizing in industrial networks. *Industrial Marketing Management, 32*(5), 357–364. https:// doi .org/10.1016/S0019-8501(03)00009-9

Galbreath, J., Georgiou, K., & Oloruntoba, R. (2022). Intention to use collaborative transportation among SMEs: An exploratory investigation of the wine industry. *Journal of Small Business Strategy*, *32*, 128–141. https://doi.org/10.53703/001c.36286

Ghalke, A., Chakravorty, C., & Rao, S. V. D. N. (2018). Earnings management in IPO bound firms: evidence from Indian SME exchanges. *Asian Economic and Financial Review*, *8*(8), 1126–1139. https://doi. org/10.18488/journal.aefr.2018.88.1126.1139

Gnyawali, D. R., & Charleton, R. T. (2018). Nuances in the interplay of competition and cooperation: towards a theory of coopetition. *Journal of Management*, *44*(7), 2511–2534. https://doi.org/10 .1177/014 9206 318788945

Granata, J., Lasch, F., Le Roy, F., & Dana, L. P. (2018). How do micro-firms manage coopetition? A study of the wine sector in France. *International Small Business Journal: Researching Entrepreneurship, 36*(3), 331–355. https://doi.org/10.1177/0266242617740412

Hoang, V. H., & Nguyen, T. S. (2018). The effect of logistics service on firm financial performance in textile industry: evidence from Da Nang City, Vietnam. *MATEC Web of Conferences*, *259*, 6. https://doi.org/ 10.1051/ matecconf/201925904002

Isada, F. (2020). Position in inter-organisational networks and profitability and growth potential. *International Journal of Business and Management*, *VIII*(2), 14. https://doi.org/10.20472/bm.2020.8.2.004

Jakobsen, S. (2019). Managing tension in coopetition through mutual dependence and asymmetries: a longitudinal study of a Norwegian R&D alliance. *Industrial Marketing Management, 84*(January), 251–260. https://doi.org/10.1016/j.indmarman.2019.07.006

Jámbor, Z. (2018). Cooperation and competition at the same time: a literature review of coopetition. *Some Recent Research from Economics and Business Studies*, 193–201. https://doi.org/10.18427/iri-2018-0071

Jen-Yin, Y., Ching-Yi, L., Chao-Kuei, C., Shu-Hui, S., & Lee-Chia, H. (2017). The influence of resource dependence and organisation learning

on R&D alliance performance. *The International Journal of Organisational Innovation*, *10*(2), 205–219.

Jørgensen, S., & Sigué, S. P. (2015). Defensive, offensive, and generic advertising in a Lanchester model with market growth. *Dynamic Games and Applications*, *5*(4), 523–539. https://doi.org/10.1007/s13235-015-0147-1

Kazantsev, N., Pishchulov, G., Mehandjiev, N., Sampaio, P., & Zolkiewski, J. (2018). Formation of demand-driven collaborations between suppliers in industry 4 . 0 production networks. *In PrePrints, 20th International Working Seminar on Production Economics, Innsbruck, March*, 255–266.

Kazungu, I. (2020). Network linkages and performance of exporting micro and small enterprises in Dar es salaam, Tanzania: Perspectives in the handicraft industry. *Global Business Review*. https://doi.org/ 10.1177/ 0972150920934433

Kazungu, I., Ngugi, P. K., Rotich, G., & Otieno, R. O. (2018). The Artisans: examining the influence of entrepreneurship training on the performance of handicraft exporting micro and small enterprises in Tanzania. *International Journal of Economics, Business and Management Research*, *2*(01), 160–184.

Le Roy, F., & Czakon, W. (2016). Managing coopetition: the missing link between strategy and performance. *Industrial Marketing Management*, *53*, 3–6. https://doi.org/10.1016/j.indmarman.2015.11.005

Lechner, C., Soppe, B., & Dowling, M. (2016). Vertical coopetition and the sales growth of young and small firms. *Journal of Small Business Management*, *54*(1), 67–84. https://doi.org/10.1111/jsbm.12131

Lewis, M. (2007). *Stepwise versus Hierarchal Regression* (Vol. 60, Issue 1). https://eric.ed.gov/?id=ED534385

Liberatore, M. J., & Miller, T. (2016). Outbound logistics performance and profitability: taxonomy of manufacturing and service organisations. *Business And Economics Journal*, *7*(2), 1–9. https://doi.org/ 10.4172/2151-6219.10002

McConnell, C., Brue, S., & Flynn, S. (2009). *Economics-princples, problems, and policies* (18th ed.). The McGraw-Hill. http://currentstudents.ajula.edu/assets/0/68/76/104/463/ee08540d-3888-4808-96aa-694ba4041cb7.pdf

Mira, B., Robert, M., Chiambaretto, P., & Roy, F. Le. (2016). Coopetition, Bargaining Power and Product Commercial Performance. *XXIVe Conférence Internationale de Management Stratégique*, 1–36.

Mori, N. (2015). Access to business development support services and

performance of youth- owned enterprises in Tanzania. *Journal of Entrepreneurship Management and Innovation (JEMI), Volume 11*(Issue 2, 2015), 57–82. https://doi.org/10.7341/20151123

Muriithi, S. (2017). African small and medium enterprises (SMEs) contributions, challenges and solutions. *European Journal of Research and Reflection in Management Sciences*, *5*(1), 14. www.idpublications.org

Mzomwe, Y., & Mutarubukwa, P. (2015). Capacity of Tanzanian micro, small and medium enterprises (MMSES) in tapping the business opportunities in the East African community. *Business Education Journal*, *1*(1), 1–20.

Nkwabi, J. M., & Mboya, L. B. (2019). A review of factors affecting the growth of small and medium enterprises (SMEs) in Tanzania. *European Journal of Business and Management*, *11*(33), 1–8. https://doi.org/ 10.7176/ ejbm/11-33-01

Pearson. (2019). *Pearson Edexcel level 3 advanced subsidiary and advanced GCE in statistics* (Issue June, p. 32). Pearson Education Ltd. https:// qualifications.pearson.com/content/dam/pdf/A Level/statistics/2017/Specification and Sample assessment material/ Statistical -formulae-and-tables.pdf

Pekovic, S., Grolleau, G., & Mzoughi, N. (2019). Coopetition in innovation activities and firms' economic performance: an empirical analysis. *Creativity and Innovation Management*, *March*, 1–14. https://doi.org/ 10.1111/ caim.12335

Pereira, T., Shackleton, C., & Shackleton, S. (2006). Trade in reed-based craft products in rural villages in the Eastern Cape, South Africa. *Development Southern Africa*. https://doi.org/ 10.1080/037 68350 600927235

Pfeffer, J., & Salancik, G. R. (1978). The external control of organisations: a resource dependence perspective. In *Harper and Row* (pp. 39–61). https://doi.org/10.2307/2231527

Ritala, P. (2012). Coopetition strategy - when is it successful? Empirical evidence on innovation and market performance. *British Journal of Management*, *23*(3), 307–324. https://doi.org/10.1111/j.1467-8551.201 1.0074 1.x

Ritala, P., & Hurmelinna-Laukkanen, P. (2009). What's in it for me? Creating and appropriating value in innovation-related coopetition. *Technovation*, *29*(12), 819–828. https://doi.org/10. 1016/j.technovation. 2009.07.002

Robert, M., Chiambaretto, P., Mira, B., & Le Roy, F. (2018). Better, faster,

stronger, the impact of market oriented coopetition on product commercial performance. *AIMS Management*, *21*(1), 574. https:// doi. org/10.3917/mana.211.0574

Sanou, F. H., Le Roy, F., & Gnyawali, D. R. (2016). How does centrality in coopetition networks matter? An empirical investigation in the mobile telephone industry. *British Journal of Management*, *27*(1), 143–160. https://doi.org/10.1111/1467-8551.12132

Santamaria, L., & Surroca, J. (2011). Matching the goals and impacts of R&D collaboration. *European Management Review*, *8*(2), 95–109. https://doi.org/10.1111/j.1740-4762.2011.01012.x

Schnitzer, M., Seidl, M., Schlemmer, P., & Peters, M. (2018). Analyzing the coopetition between tourism and leisure suppliers-a case study of the leisure card Tirol. *Sustainability (Switzerland)*, *10*(5). https://doi.org/ 10.3390/su10051447

Simms, L. J., Zelazny, K., Williams, T. F., & Bernstein, L. (2019). Does the number of response options matter? Psychometric perspectives using personality questionnaire data. *Psychological Assessment*, *31*(4), 557–566. https://doi.org/10.1037/pas0000648

SPSS. (2022). *How to test validity questionnaire using SPSS - SPSS Tests*. http://www.spsstests.com/2015/02/how-to-test-validity-questionnaire.html

Studenmund, A. H. (2014). Chapter 8: Multicollinearity. In *Using Econometrics: A Practical Guide* (Vol. 6, pp. 261–320). https:// www.s fu.ca/ ~dsignori/buec333/lecture 16.pdf

Synovate, I. (2012). *Market Research on Handicraft Products in East Africa - Tanzania*. https://issuu.com/t radefordevelopmen tcentre/docs /handi craft _industry_in_tanzania

Tambwe, M. (2017). Assessing the efficiency of marketing communication tools used by Tanzanian handcrafts for enhancing export performance. *Business Education Journal*, *1*(2), 1–19.

Tavakol, M., & Dennick, R. (2011). Making sense of Cronbach's alpha. *International Journal of Medical Education*, *2*, 53–55. https://doi.org/1 0.5116/ijme.4dfb.8dfd

Tidström, A., & Rajala, A. (2015). Coopetition as interrelated strategic practices on multiple levels. *Managing Coopetition in Business Networks – a Practice Perspective*, 20. https://www.impgroup .org/ uploads/ papers/8514.pdf

Tulsian, M. (2014). Profitability analysis (a comparative study of SAIL & TATA steel). *IOSR Journal of Economics and Finance*, *3*(2), 19–22. https://doi.org/10.9790/5933-03211922

Uakarn, C., Chaokromthong, K., & Sintao, N. (2021). Sample size estimation using Yamane and Cochran and Krejcie and Morgan and Green formulas and Cohen statistical power analysis by G*Power and comparisons. *APHEIT INTERNATIONAL JOURNAL*, *10*(2), 76–88.

van den Broek, J., Boselie, P., & Paauwe, J. (2018). Cooperative innovation through a talent management pool: a qualitative study on coopetition in healthcare. *European Management Journal*, *36*(1), 135–144. https://doi.org/10.1016/j.emj.2017.03.012

Walley, K. (2007). Coopetition : an introduction to the subject and an agenda for research. *International Studies of Management & Organisation*, *37*(2), 22. https://doi.org/10.2753/IMO0020-8825370201

Wayan Edi Arsawan, I., Koval, V., Duginets, G., Kalinin, O., & Korostova, I. (2021). The impact of green innovation on environmental performance of SMEs in an emerging economy. *E3S Web of Conferences*, *255*. https://doi.org/10.1051/e3sconf/202125501012

Wineaster, A. (2017). Factors affecting small & medium enterprises (SMEs) startup and growth in Tanzania. *The Pan-African Journal of Business Management*, *1*(1), 1–26.

Wu, J. (2014). Cooperation with competitors and product innovation: moderating effects of technological capability and alliances with universities. *Industrial Marketing Management*, *43*(2), 199–209. https://doi.org/10.1016/j.indmarman.2013.11.002

Yasa, N. N. K., Sukaatmadja, I. P. G., Adnyani, I. G. A. D., Utama, I. W. M., & Sudiartha, G. M. (2017). Strategic orientation, corporate innovation, and marketing performance (a study of Ikat weaving industry in Bali). *IOSR Journal of Business and Management*, *19*(03), 25–33. https://doi.org/10.9790/487x-1903022533

Yazdanfar, D., & Öhman, P. (2015). The growth-profitability nexus among Swedish SMEs. *International Journal of Managerial Finance*, *11*(4), 531–547. https://doi.org/10.1108/IJMF-01-2015-0005

Ye, J., & Kulathunga, K. M. M. C. B. (2019). How does financial literacy promote sustainability in SMEs? A developing country perspective. *Sustainability (Switzerland)*, *11*(10), 1–21. https://doi.org/ 10.3390/ su11102990

Yumna Majdina, M., Praptono, B., Dellarosawati Idawicaksa, M., & Sulawesi Selatan, M. (2020). Designing warehouse inventory management application web-based on batik Sinuwun SME with the agile scrum development method. *Journal of Industrial Engineering Management*, 176–182. http://dx.doi.org/10.3 3536/jiem. speciale dition.771

Zacharia, Z., Plasch, M., Mohan, U., & Gerschberger, M. (2019). The emerging role of coopetition within inter-firm relationships. *International Journal of Logistics Management*, *30*(2), 414–437. https:// doi. org/10.1108/IJLM-02-2018-0021

Zafar, A., & Mustafa, S. (2017). SMEs and its role in economic and socio-economic development of Pakistan. *International Journal of Academic Research in Accounting, Finance and Management Sciences*, *7*(4). https://doi.org/10.6007/IJARAFMS/v7-i4/3484

Zimon, G. (2020). The influence of the central warehouse on the functioning of Polish small and medium-sized enterprises operating in group purchasing organisations. *Problems and Perspectives in Management*, *18*(1), 26–32. https://doi.org/10.21511/ppm.18(1).2020.03