IMPACT OF REVERSE LOGISTICS ON FIRM'S SURVIVAL IN KUMASI: THE ROLE OF ORGANISATIONAL CULTURE

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ABSTRACT

Purpose: The study aimed to investigate the impact of reverse logistics on firms' survival and the role of organizational culture. It ascertained the forms of reverse logistics practices adopted by the selected firms and determined the effect of reverse logistics on organizational survival. It then assessed the influence of organizational culture on the relationship between reverse logistics and firms' survival.

Design/Methodology/Approach: The researchers used an exploratory design with a structured questionnaire with a sample size of one hundred and fifty-one (151). Purposive and snowball sampling techniques were used to contact five (5) firms in Kumasi and descriptive statistics were employed to analyse the data. Regression analysis was employed to examine the relationship between organizational culture and the survival of firms in the context of reverse logistics.

Findings: The results show that remanufacturing, reusing, recycling, repackaging, redistribution, reselling, and repairing and reconditioning are some of the major forms of reverse logistics practiced in these firms. Also, reverse logistics have a positive effect on organizational survival. Again, the introduction of organizational culture depicted that variation in organizational survival depended more on organizational culture than reverse logistics.

Research Limitation: The organizational culture, business environment, and cultural dynamics in Ghana may differ from other countries or regions. Therefore, the results of this study should be interpreted within the Ghanaian context, and caution should be exercised when applying them to other contexts.

Practical Implications: The study recommended the adoption by firms to use reverse logistics activities in order to survive and pay more attention to organizational culture.

Social Implications: The study encourages Ghanaian firms to adopt more sustainable practices within their reverse logistics operations.

Originality/Value: The study connects the domains of reverse logistics and firm survival. This integration adds novelty by examining how the organizational culture's impact on reverse logistics practices ultimately contributes to the survival and long-term success of firms in Ghana.

Keywords: Firm survival. organisational culture. reverse logistics. sustainable. Ghana.

INTRODUCTION

Reverse logistics is the coordination and distribution of transport, storage, packing, and inventory management straight from the producer to the client (Sanchez-Rodrigues et al., 2016). The reverse logistics process is returning commodities to their original suppliers after purchase, or products can be returned for servicing or exchange, or even after use for proper disposal if garbage accumulates (Leite, 2019).

Rogers and Tibben-Lembke (2018) define reverse logistics as the process of organising, implementing, and managing an economical flow of raw materials, inventory held during production, finished goods, and related information from the consumption point to the origin in order to recover value or dispose of waste in an appropriate manner for collection and treatment. When reverse logistics is managed efficiently, firms can decrease expenses, increase revenues, and improve customer satisfaction (Badenhorst, 2018). In addition, they can increase their overall environmental performance (Carter & Ellram, 2019). As a result, reverse logistics must be meticulously planned, executed, and monitored. The primary goal of this research is to look into the impact of reverse logistics on a company's longevity, as well as the significance of organisational culture.

THEORETICAL AND EMPIRICAL LITERATURE REVIEW

Manufacturing firms, like every other sector of the economy, are constantly looking for new opportunities and systemic difficulties that can be resolved (Trochu et al., 2018). Logistics is critical to the success of every business because it involves the most efficient utilisation of man, machine, and material. Reverse logistics is a minor component of a company's overall logistics (Guarnieri, Silva, & Levino, 2016). According to Govindan and Bouzon (2018), reverse logistics is the management of goods that customers return to the manufacturer. It includes all of the processes that control what happens to returned items. Organisations use reverse logistics to improve operational effectiveness and ensure market success (Butzer et al., 2017).

Logistics is a component of the supply chain process that organises, executes, and maintains the capacity of food storage, service, and related information from point of origin to point of use in order to meet the needs of consumers (Council of Logistics Management, 2012). This flow will also include numerous users such as suppliers, manufacturers, retailers, and customers. Customers are becoming more influenced by a company's corporate social responsibility and environmental initiatives (Hillenbrand, Money, & Ghobadian, 2013).

Businesses are realising that they must deal with a wide range of vulnerabilities, not just specialised ones. Product recalls, warranty returns, service returns, end-of-use returns, and end-of-life returns have all contributed to an increase in product returns (Ravi, 2013). Businesses should be concerned about the cost of returning product components as they progress with factors that drive down operational costs while incurring higher expenses due to environmental constraints (Alshamrani et al., 2007).

Several industrial organisations focused on supply chain operations such as forward supply chains and logistics to meet client demand. Product returns are increasingly being requested by manufacturers and merchants, and these requests have gotten a lot of media attention. The concept of reverse logistics has only recently gained popularity due to marketing and competitive incentives, immediate economic benefits, and environmental concerns (Kaynak et al., 2014), and understanding and utilising reverse logistics can assist firms in becoming more competitive (Alshamrani et al., 2007).

According to Trebilcock (2018), reverse logistics comprises a five-step process that begins with a return authorization and continues with transportation, auditing, product disposition, and the development of a tracking information system. Reverse logistics, according to some writers, is the second in a series of reverse supply chain operations that also includes product acquisition, inspection and disposition, reconditioning, and remarketing (Blackburn et al., 2018). Reverse logistics, according to (Sanchez-Rodrigues, 2016), is "the process of organising, implementing, and managing the efficient, affordable flow of raw materials, work-in-progress inventory, finished goods, and related information from points of consumption to points of origin in order to recover value or properly dispose of the goods." According to the authors, reverse logistics is the logistical function that corresponds to green marketing. Reverse logistics includes product returns, recycling, material substitution, resource reuse, trash disposal, and refurbishing, repairing, and remanufacturing (Sople, 2018). According to Toke et al. (2017), reverse logistics is concerned with the return flow, which involves either defective components or shipments or commodities that have been returned or consumed and must be recycled. It is critical to understand that the life cycle of a product does not stop when it no longer performs its intended purpose.

Traditional logistics is concerned with the availability of finished items to consumers, whereas reverse logistics is concerned with the return of the same things from the consumer to the original manufacturer. As a result, understanding reverse logistics is critical for both organisations and customers. According to Toke et al. (2017), the goal of reverse logistics is to organise, manage, and supervise the after-sales and post-consumer return of items. After-sales products are items that are returned to the company for a number of reasons, such as flaws, errors, or delivery concerns.

The continued operation of a business organisation is how an organisation survives and is sometimes referred to as managing to stay in business (Akindele, Oginni, & Omoyele, 2012). A company's ability to continue operating despite a range of challenges, such as the managerial process of habitually managing a company's affairs on a going-concern basis and satisfying the demands of all stakeholders (Akindele et al., 2012), is referred to as business survival.

According to various global experts, the relationship between organisational culture and reverse logistics is critical to an organization's effectiveness (Quinn, 2011). Schein (2019) utilised the term "group" to denote all sizes of social entities in any study of organisational

culture. Corporate culture, according to Quinn (2011), can assist distinguish between successful and failed organisations. According to some scholars, organisational culture is a complex topic that affects both the workplace and society as a whole. It has a direct impact on the firm's performance and efficacy; if the organisational culture is strong, the company will be more successful.

According to most organisational culture presentations, culture is the "social glue" that ties everyone in the organisation together (Cameron & Ettington, 2017; Schein, 2019). The term "organisational culture" also refers to a set of norms, values, and fundamental assertions shared by all members of an organisation, including its objectives, missions, procedures, and policies (Hofstede, Neuijen, Ohayv, & Sanders, 2019; Khazanchi, Lewis, & Boyer, 2017). Organisations have usually focused on improving their forward logistics operations; the majority of organisations have not given the reverse logistics process the same attention and care that they have given other traditional areas of logistics. Most manufacturers concentrate much too much focus on forward logistics and fail to recognise the potential benefits of reverse logistics for increasing company and supply chain efficiency.

Although it is commonly overlooked, reverse logistics can be costly but offers a variety of benefits, making it a significant aspect of the supply chain and its research (Horowitz, 2012). Many constraints and obstacles make managing reverse logistics efficiently and proactively difficult (Ravi & Shankar, 2014). As a result, many businesses consider reverse logistics to be a nuisance. According to the current research, the problem is exacerbated by organisations' lack of expertise in the process, its processes and procedures, and the strategies for managing it efficiently and quickly (Abdulrahman & Subramanian, 2011; Daugherty et al., 2019). As a result, the purpose of this research is to establish the impact of reverse logistics on a firm's survival, as well as the function of organisational culture. It investigates how organisational culture and reverse logistics affect a company's ability to thrive.

Conceptual Framework

The dependent variable is the firm's survival, which includes financial performance, customer performance, and operational efficiency. Company culture is made up of three components: the organization's regulations, traditions, and personalities. Reverse logistics practises, which include reusing, recycling, repackaging, repair and reconditioning, disposal, redistribution, and reselling, are the independent variable. As a result, the researchers created the conceptual framework (shown in figure1) to guide the investigation.

Reverse logistics practices

| Remanufacturing Practices |
| Reusing Practices |
| Recycling Practices |
| Repackaging Practices |
| Redistribution and Resell |
| Repair and recondition |
| Disposal |

Organizational Culture

| Rules |
| Tradition |
| Personalities |

Firm's Survival

| Financial performance |
| Customer performance |
| Operational Efficiency |

Dependent Variable
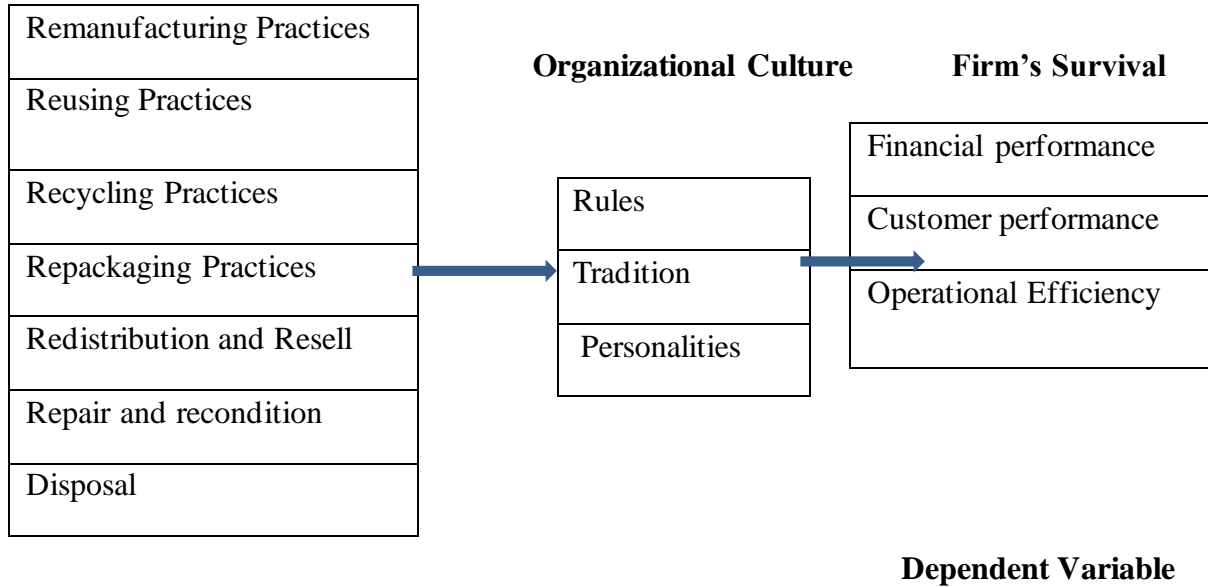
Independent variable

Figure 1: Conceptual Frameworks
Source: Researcher's construct (2022)

Several studies have exclusively examined specific areas of organisational survival and reverse logistics in developing countries such as Ghana. According to various writers, including Ashby et al. (2012), waste management through reverse logistics and garbage exchange can result in cost savings and enhanced competitiveness as a firm's environmental efficiency increases. They add that reverse logistics, in which every output is returned to natural systems or used as an input to make another product, maximises the utilisation of used products. Kwateng et al. (2014) investigated reverse logistics practises in the pharmaceutical manufacturing business utilising Ghanaian experiences. According to the study's findings, purchasing IT software such as an ERP system can help organisations run more efficiently.

To the best of the researchers' knowledge, studies on reverse logistics have not been conducted extensively on the topic of business longevity and the effect of organisational culture. This study intended to fill that gap by exploring the impact of reverse logistics on business survival as well as the function of organisational culture.

METHODOLOGY

Research Design

The study method used was an exploratory design. Reverse logistics' effect on a company's ability to survive was studied in connection to organisational culture. Instead of needing to conduct expensive studies on them, it allowed the researcher to draw conclusions about bigger groups using smaller groups of people (Holton & Burnett, 2005). The authors also said that questionnaire surveys enhanced observational consistency and replication due to their inherent standard measuring and sampling methodologies.

In order to examine, this study adopted a quantitative methodology. Utilising statistics, the quantitative approach analyses data.

Population

The research population was made up of professionals in procurement management from a number of carefully selected manufacturing firms in Ghana's Ashanti Region. These professionals included procurement officials, stores, logistics officers, financial officers, and auditors. Intravenous Infusion PLC, Joy Industries Limited, Chocho Industries Company Limited, Y&K Company Limited, and Special Ice Mineral Water are among these businesses.

Sample Size and Sampling Technique

In accordance with the research methodology, objective, and potential applications of the study, the study used a purposeful sampling strategy. Bernard (2012) describes purposeful sampling as a type of non-probability sampling in which the researcher chooses the sample's members based on a variety of criteria, such as their knowledge of the research topic or their capacity and willingness to participate in the study. In addition, the study found participants using the snowball sampling method. One hundred fifty-one (151) administered questionnaires were sent to five (5) firms in Ghana's Eastern Region using snowball and purposeful sampling strategies.

Collection of Data

According to Bernard (2012), collecting data is crucial for research. This is due to the fact that data greatly facilitates understanding the theoretical foundations. Since no amount of analysis can make up for data that was wrongly acquired, it is imperative to carefully select the method of data collection and the source of the data.

Data from both primary and secondary sources were used in this investigation. The data-gathering process includes both a literature study and a field survey. Bernard (2012) defined primary data as information that is acquired directly. Questionnaires were the main instrument utilised in this study to gather the primary data. The core data for the initial stage of the research was provided by procurement managers from the various businesses chosen for the study in the Ashanti area.

Secondary sources of data are based on previously obtained data. For this study's secondary data, sources included databases, the internet, books, journals, and magazines. For this study, secondary sources of data included a variety of books on the topic that were gathered from libraries and online sources. Secondary data from journals was also crucial for the literature review.

Validity and Reliability

While validity tests are used as part of the assurance of estimation on the off chance that the measure actually reflects the concept under investigation, reliability is concerned with consistency and a measure's capacity to provide comparable outcomes each time a test is undertaken. To verify the reliability of the data collection instrument, the expert opinions of several researchers with expertise in the area of the investigation were sought out. The accuracy of the study instrument was evaluated using the Cronbach Alpha Coefficient. The inter-item correlations are given a coefficient by the Cronbach alpha. If the Cronbach alpha was at least 0.7, which ranges from 0 to 1, it was considered a reliable estimate.

Data Analysis

To analyse data and provide answers to research questions, data must first be categorized, arranged, modified, and summarized. In order to study, test, and make conclusions about the linkages between research topics, data must be reduced to a form that is simple to comprehend and analyse. Interpretation examines the data, makes inferences about the relationships under study in the research, and comes to conclusions regarding these correlations. The completed questionnaires' accuracy, consistency, and readability were examined. The data was verified and then put into a format that would make easy analysis possible.

The analytical tool to be utilized is significantly influenced by a thorough assessment of the analytical and statistical tools that are now available. When choosing a statistical instrument, both parametric and non-parametric statistical tests would be taken into account. Much importance was given to the degree of measurements made in the study as well as the type of variables when deciding which of the two to choose. For non-parametric statistical testing, descriptive statistics were employed. The statistical package for social sciences (SPSS)

software was programmed and used to enter the quantifiable data from the surveys for analysis. Microsoft Excel and SPSS Version 26 were used to conduct the analysis for this study.

Ethical Considerations

To avoid misrepresenting other academics, ethical considerations should be incorporated into every study. Also, it helps to ensure the respondents' confidentiality and privacy while participating in the study. Before starting this investigation, consent from the management of the chosen firms was sought. By doing this, it was impossible for any of the responses to have divulged information without the organization's consent. Additionally, for any reason, survey participants' identities were not collected. In order to safeguard the respondents' identities, this was done. Further, the data collected through questionnaires and secondary sources of data were exclusively used for this study in order to ensure complete privacy.

FINDINGS AND DISCUSSION

Here we present findings obtained after the analysis of data. Respondents' background information, results for research questions and discussion of findings.

Descriptive statistics were used to analyse the data in the form of mean scores and measures of dispersion. Visualizations such as tables were used to present the data effectively. Regression analysis was employed to examine the relationship between organizational culture and the survival of firms in the context of reverse logistics.

Demographic Characteristics

The respondents' gender, age, marital status, employment history, and other details are shown in Table 1. There were 151 employees in all who responded. Out of the 151 respondents sampled for the study, the data revealed that 10.9% of respondents (72.2%) are men and 42.9% of respondents (27.8%) are women. According to the data, men make up the majority of responders, which may reflect the gender composition of the institutions chosen for the sample. According to the study's analysis of the 151 respondents who were randomly selected, 20.5% of the respondents were between the ages of 31 and 40 years, and roughly 45.7% of the total respondents were between the ages of 18 and 30. According to the data, the majority of responders are between the ages of 31 and 39. Last but not least, 33.8% of the respondents were in the 41–50 age range. This demonstrated that the personnel in the sampled institutions were young. Out of the 151 respondents sampled for the study, it was also noted from the data that the majority of respondents (50.3%) have first degrees. A Master's degree was also held by roughly 20.5% of the respondents. Only 4.0% of the respondents held any further degrees, whereas 11.9% and 13.2% of the sample were HND and Diploma graduates.

Additionally, data on the respondents' average tenure was acquired. The results revealed that out of the 151 total respondents, 9.3% and 39.7% had been employed for less than a year and one to five years, respectively, respectively. In addition, 34.4% of respondents and 15.2% of respondents, respectively, have worked for the sampled institution for between 6 and 10 and 11 and 15 years. Lastly, 1.3% of the respondents have been employed by the institution sampled for more than 15 years.

Table 1: Demographic Characteristic

Demographic Characteristics		**Frequency**	**Percentage**
Gender	Male	109	72.2
	Female	42	27.8
	Total	151	100.0
Age	18-30 years	69	45.7
	31-40 years	31	20.5
	41-50 years	51	33.8
	Total	*151*	*100.0*
Number of years Employed	Less than 1 year	14	9.3
	1-5 years	60	39.7
	6-10 years	52	34.4
	11-15 years	23	15.2
	Over 15 years	2	1.3
	Total	*151*	*100.0*
Highest Educational level	Diploma	20	13.2
	HND	18	11.9
	1st Degree	76	50.3
	Masters	31	20.5
	Others	6	4.0
	Total	*151*	*100.0*

Source: Field data, 2022

Reverse Logistics

To ascertain the reverse logistics practices within the selected firms, a 6-item questionnaire was adopted. The questionnaire measured from 5-Strongly Agree, 4-Agree, 3- Not Sure, 2- Disagree and 1- Strongly Disagree. Remanufacturing Practices had a score of (M=4.30: SD=.958), Reusing Practices scored (M=4.18: SD.849), Recycling Practices (M=4.02: SD=.920), Repackaging Practices (M=4.03: SD=.647), Redistribution and resell (M=3.38:SD=.930), finally, Repair and recondition (M=2.95:SD=.681). The average core of the items selected as a measure of reverse logistics was (M=3.81: SD=.831). (See Table 2)

Table 2: Reverse Logistics

One-Sample Statistics

	N	Mean	Std. Deviation	Std. Error Mean
Remanufacturing Practices	151	4.30	.958	.078
Reusing Practices	151	4.18	.849	.069
Recycling Practices	151	4.02	.920	.075
Repackaging Practices	151	4.03	.647	.053
Redistribution and resell	151	3.38	.930	.076
Repair and recondition	151	2.95	.681	.055
Average Scores	*151*	*3.81*	*0.831*	*0.068*

Source: Field data, 2023

Organisational Survival

In the quest to assess organisational survival among the selected organisations, the study employed a 6-item questionnaire was adopted. The questionnaire measured from 5-Strongly Agree, 4-Agree, 3- Not Sure, 2-Disagree and 1- Strongly Disagree. The findings from the descriptive statistics showed that determinants such as "Offers opportunity to build good will affect corporate image" scored (M=4.99: SD=1.039), Reduces purchasing related risk had a score of (M=4.87:SD=.485), Increases revenue from secondary sales (M=4.95:SD=.681), Improves inventory control had a score of (M=4.85: SD=.743), Enhances customer satisfaction (M=3.74:SD=.648), lastly, saves money by reusing resources scored (M=3.75: SD=.748). The average score for organisational survival was (M=**4.52: SD=0.621).**

Table 3: Organisational Survival

One-Sample Statistics

	N	Mean	Std. Deviation	Std. Error Mean
Offers opportunity to build good will affect corporate image	151	4.99	1.039	.085
Increases revenue from secondary sales	151	4.95	.681	.055
Improves inventory control	151	4.85	.743	.060
Saves money by reusing resources	151	3.75	.748	.061
Enhances customer satisfaction	151	3.74	.648	.053
Average Scores	*151*	*4.52*	*0.621*	*0.051*

Source: Field data, 2022

Organisational Culture

To determine Organisational Culture, the study adopted a 6-item questionnaire. The questionnaire measured from 5-Strongly Agree, 4-Agree, 3- Not Sure, 2-Disagree and 1-Strongly Disagree. Factors such as "The organization has a culture that determines how reverse logistics are done" scored (M=4.10:SD=.847), "Organizational culture provides a framework in which managers can implement reverse logistics" (M=4.91:SD: .581), Organizational culture fosters employees motivation for the adoption of reverse logistics (M=4.88:SD=.816), "Employees in the organization have a sense of identity which increases their commitment to reverse logistics" (M=4.87: SD.715), "The organization is guided by values of consistency adaptability and effective communication system for reverse logistics"(M=4.87: SD=.646), "Rules set out for reverse logistics within the organization are practical and fair" (M=3.10: SD=.772), "The organization has vision, mission and goals that guide all stakeholders in reverse logistics" (M=4.68: SD=.495). The determinants for organisational culture had an Average Score of (M=4.49: SD=0.071). See Table 4.

Table 4: Organisational Culture

One-Sample Statistics

	N	Mean	Std. Deviation	Std. Error Mean
Organizational culture provides a framework in which managers can implement reverse logistics.	151	4.91	.581	.047
Organizational culture fosters employee's motivation for the adoption of reverse logistics	151	4.88	.816	.066
Employees in the organization have a sense of identity which increases their commitment to reverse logistics	151	4.87	.715	.058
The organization is guided by values of consistency adaptability and an effective communication system for reverse logistics	151	4.87	.646	.053
The organization has a vision, mission and goals that guide all stakeholders in reverse logistics.	151	4.68	.495	.040
The organization has a culture that determines how reverse logistics are done	151	4.10	.847	.069

Rules set out for reverse logistics within the organization are practical and fair.	151	3.10	.772	.063
Average Scores	*151*	*4.49*	*0.071*	*0.006*

Source: Field data, 2022

Effects of Reverse Logistics on Organizational Survival

To determine the effect of reverse logistics on the organisational survival of the selected institutions, a regression analysis was used.

From Table 5, the R^2 which predicts how much the total variations in organisational survival could be explained by reverse logistics was 0.139 indicating that 13.9% of the total variation in organisational survival could be explained by only reverse logistics.

Table 5: Effects of Reverse Logistics on Organizational Survival

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.373[a]	.139	.134	2.83690

a. Predictors: (Constant), Reverse Logistics
Source: Field data, 2022

Given p = .05 which is less than 0.05 proof that the regression model was statistically significant and the data were best fit for the model given. Thus, the regression model is a good fit for the data and statistically predicts Organisational Survival. (See Table 6).

Table 6: Effects of Reverse Logistics on Organizational Survival

ANOVA[a]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	194.346	1	194.346	24.148	.000[b]
	Residual	1199.151	149	8.048		
	Total	1393.497	150			

a. Dependent Variable: Organisational Survival

b. Predictors: (Constant), Reverse Logistics

Source: Field data, 2022

Again, with the regression equation; $Y = \beta0 + \beta1X1 + \varepsilon$, where; Y = Organisational Survival, X1 = reverse logistics and ε = random error term, the model equation is presented as Organisational Survival = 7.217+ 0.306 (reverse logistics). The extract from the model indicates that an increase in reverse logistics will lead to an increase in Organisational Survival.

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Thus, a percentage increase in reverse logistics would lead to a 30.6% increase in Organisational Survival and vice versa (see table 7). Based on the findings of the study, the study admits that there is a significant positive effect of reverse logistics on organisational survival.

Table 7: Effects of Reverse Logistics on Organizational Survival

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	7.217	.833		8.661	.000
	Reverse Logistics	.306	.062	.373	4.914	.000

a. Dependent Variable: Organisational Survival

Source: Field data, 2022

Influence of Organizational Culture on the Relationship between Reverse Logistics and Organizational Survival

The result as shown in Table 8 indicates that the R-square value (coefficient of determination) for reverse logistics and its effect on organizational survival was 0.139 (13.9%), which implies 13.9% of the changes that occur in organizational survival can be explained by the reverse logistics practices of the selected firms. The Table showed that introducing organizational culture as a mediator variable also produced an R-square value of 0.526 (52.6%), which also implied that, 52.6% of the variation that occurred in organizational survival could be explained reverse logistics and organizational culture as a mediating variable or factor. Given the R-square change recorded using organizational culture as a mediator was 0.387, it implies that organizational culture inspired 38.7% explanation power to the changes that occurred in organizational survival.

Table 8: Influence of Organizational Culture on the Relationship between Reverse Logistics and Organizational Survival

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.373[a]	.139	.134	2.83690
2	.725[b]	.526	.519	2.11337

a. Predictors: (Constant), Organisational Culture, Reverse Logistics

Table 8 which indicates the extent to which the regression equation or model best fits the data and able to predicts organisational survival. In this regard, table 9 indicates that the regression model was statistically significant given p = 0.000. It was concluded that the regression model is a good fit for the data and statistically predicts organisational survival.

Table 9: Influence of Organizational Culture on the Relationship between Reverse Logistics and Organizational Survival

ANOVA[a]

Model		Sum of Squares	Df	Mean Square	F	Sig.
	Regression	194.346	1	194.346	24.148	.000[b]
1	Residual	1199.151	149	8.048		
	Total	1393.497	150			
	Regression	732.482	2	366.241	82.001	.000[c]
2	Residual	661.015	148	4.466		
	Total	1393.497	150			

a. Dependent Variable: Organisational Survival

b. Predictors: (Constant), Organisational Culture, Reverse Logistics

Given the regression equation; Y= β0 + β1X1 + β2X2+ ε, where; Y = Organisational Survival, X1 = reverse logistics, β2X2= organisational culture and ε = random error term, the model equation could be presented as Organisational Survival = 2.602 + -.024 (reverse logistics) + .660 (organisational culture). All other things being equal, the introduction of organisational culture showed that Organisational Survival variation depended more on organisational culture than reverse logistics (see table 10).

Table 10: Influence of Organizational Culture on the Relationship between Reverse Logistics and Organizational Survival

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	7.217	.833		8.661	.000
	Reverse Logistics	.306	.062	.373	4.914	.000
2	(Constant)	2.602	.750		3.471	.001
	Reverse Logistics	-.024	.055	-.029	-.437	.663

Organisational Culture	.660	.060	.741	10.977	.000

a. Dependent Variable: Organisational Survival

Discussion of Findings

The results demonstrate that some of the key aspects of reverse logistics used by these businesses include remanufacturing practises, reusing practises, recycling practises, repackaging practises, redistribution and reselling, and repair and reconditioning. The study's conclusions are consistent with previously published research. For instance, reverse logistics strategies have been categorised by numerous academics (Rogers & Tibben Lembke, 2018). The idea of reverse logistics processes includes remanufacturing, refurbishing, disposal, recycling, repackaging, returns processing, and salvage (Rogers & Tibben Lembke, 2018). The authors also emphasised reverse logistics, which includes recycling, remanufacturing, and reuse.

Remanufactured products include, among other things, tyres, furniture, cars, cameras, cell phones, vending machines, automated teller machines, and electrical items. The major steps in remanufacturing are disassembly, cleaning of parts, inspection and sorting, repair, refurbishing or replacement of problematic parts, and finally assembly and testing. Remanufacturing can help the supply chain operate more efficiently. The ability to recover the value of products that would otherwise be lost if they are not returned is one advantage. According to Statham (2016), remanufacturing is thought to save 85% or more of the initial energy and resources.

Reusing also refers to the act of selling discarded or abandoned items that have not undergone any additional processing. The product's worth is nevertheless diminished because no manufacturing is done to improve performance or return it to a new, like state (Eltayeb et al., 2018). According to Statham (2016), the reuse process entails identifying and inspecting the products, repairing them without further processing, cleaning them so they may be reused, and finally providing them to customers. This shows that using consumes less energy than recycling or remanufacturing. Reuse can improve operational effectiveness in several ways. First and foremost, reuse saves energy because it doesn't require processing. This encourages cost-cutting measures. Repurposing allows products to be quickly reintroduced to the market, which boosts dependability and delivery speed.

Reverse logistics also includes breaking down an old product into its component elements in order to reprocess it into new or original forms. Materials that can be recycled include plastics, paper, glass, batteries, lightbulbs, and metals (Wong, 2020). Recycling enables businesses to cut costs associated with landfill property acquisition as well as the transportation of waste products (Denne et al., 2017). Recycling promotes material recovery while reducing energy use in a company. Utilising less material per unit of output results in greater environmental efficiency.

Giving physical protection, confinement, handling, transportation, and marketing to products from raw materials to finished goods are also included in repackaging practises (European Federation of Corrugated Board Manufacturers, 2019). The three groups are primary, secondary, and tertiary repackaging levels. The viability and performance of a corporation are impacted by repackaging. As a starting point, repackaging is less expensive than recycling and remanufacturing (Hazen, Hall & Hanna, 2017). By repackaging resources in various sizes, clients can choose the package size that they prefer, adding another layer of operational flexibility. Unbundled materials require greater storage space than bundled ones. Increased openness in a warehouse makes it easier for people and commodities to move around, which increases output.

Reusable items are distributed to future customers or markets through redistribution, a type of reverse logistics (Fleishmann et al., 2016). In other words, redistribution is the process of transferring reusable goods to prospective new consumers and guiding them to a market or markets. Redistribution may also occur when a business wishes to sell a recycled good, but it must first determine whether the recycled good is in demand (Roy, 2018). In this instance, the item gets resold. The company has lots of choices for resale. The products may be sold in their entirety or in fragments by the organisations (Hugo et al., 2019). The business has access to recycling facilities, dealers, and brokers among other options. If the products have not been utilised, the company may sell them again to a different customer or an outlet store (Rogers & Tibben-Lembke, 2018). Another choice is to sell additional supplies to the company's employees (Hugo et al., 2019).

Finally, repair refers to the removal of particular product flaws. "Repair/repackage" is the term for minor repairs and/or repackaging that allow the product to be reused (Hugo et al., 2019). According to Rogers and Tibben-Lembke (2018), reconditioning is the act of fixing and cleaning a product in order to return it to its original state. Reconditioning the parts for reuse enables businesses to recover value from returned goods (Roy, 2018). Reconditioning is the process of restoring an outdated product to a perfect functioning condition, despite the fact that it might not have met the original requirements.

Effect of Reverse Logistics on Organizational Survival

A regression analysis was done to examine the impact of reverse logistics on the organisational survival of the chosen institutions. Reverse logistics alone may account for 13.9% of the entire variance in organisational survival, according to Table 8's R^2, which indicates how much of the total differences in organisational survival might be explained by reverse logistics. The results of the regression study demonstrated that reverse logistics are beneficial to organisational survival. The study's conclusions are consistent with previous research.

For instance, Daugherty et al. (2019) proposed that recycling and waste reduction reduce waste, which lowers waste management costs for enterprises to a minimum. Repackaging is essential for improving the company's brand and cutting costs for marketing. Lower information costs and greater distribution flexibility would result from information sharing along the reverse chain (Koste & Malhotra, 2018). Reverse logistics raises dependability while also reducing expenses. Reverse flow tracking will boost customer confidence in the company by accelerating the delivery of returned goods at the business and the settlement of customer complaints. A company is more likely to survive if it engages in joint ventures and has external reverse logistics partners.

Many organisations use reverse logistics, either internally or through outsourced specialised companies, in order to recover economic value, boost competitiveness, demonstrate corporate responsibility through inventory management, and demonstrate compliance with laws, according to Fernández and Kekäle (2018). The benefits of adopting reverse logistics, according to Haibo (2018), range from environmental legislation requiring businesses to treat returned products appropriately to the economic benefits of reusing products returned to the company, as well as raising customer environmental consciousness.

The two main spheres where reverse logistics might aid a business in surviving, according to Dutton (2020), are the economic and social spheres. The first is that by reusing materials that would otherwise be thrown away owing to financial incentives, the corporation can save money. The company's advantages in terms of dumping less waste in landfills and so reducing the risk of soil and groundwater contamination are examined in the social component. Ecological sensitivity and environmental sustainability are advantageous aspects of reverse logistics, claim Ramos et al. (2013). Due to society's concern over the appearance of ecological balance, customers have become more informed and demanding. Environmental concerns are often used by businesses, including the government, to distinguish their products and political goals, providing them an advantage in the marketplace.

For their side, Rogers et al. (2017) suggested that the primary goal of reverse logistics is cost reduction (to reduce costs and boost revenues). By guaranteeing that there are available, reasonably priced replacement materials for the originals, reverse logistics helps to conserve time, energy, and natural resources. According to Rogers et al. (2017), reverse logistics is a method for recovering value from returned items by salvaging, reusing, or mending them.

Last but not least, decreasing reverse logistics costs is associated with increased firm survival and growth (Turrisi et al., 2018). This is because reverse logistics allows for cost reductions. For instance, profits increase when costs for reverse logistics and purchasing new goods are reduced, allowing a corporation to retain and expand operations. In contrast, effective management of reverse logistics results in a positive reputation and high levels of customer satisfaction, both of which are critical for a business's success and survival.

Influence of Organizational Culture on the Relationship between Reverse Logistics and Organizational Survival

According to the results in Table 8, 13.9% of the changes in organisational survival can be attributed to the reverse logistics practises of the chosen firms, with an R-square value of 0.139 (coefficient of determination) for reverse logistics and its impact on organisational survival. Reverse logistics and organisational culture as mediating variables or factors were shown in the table to produce an R-square value of 0.526 (52.6%), which further implied that 52.6% of the variation in organisational survival could be explained by these two factors. Given that organisational culture served as a mediator and an R-square change of 0.387 was observed, it is likely that organisational culture contributed 38.7% of the explanatory power for changes in organisational survival. The study found that the inclusion of organisational culture revealed that organisational culture was more important than reverse logistics in determining organisational survival variation. These results are consistent with those of Byrne and Hochwarter (2012), who held the opinion that employees' faith in their company's success increased their dedication to reverse logistics and the survival of the company, aided in the accomplishment of the latter's objectives, and made them more devoted to their employers. Organisational culture can be exemplified by the advancement of occupations, organisational awards, promotions, and praise, as well as involvement in policy formation.

Organisational culture is one of the many variables that influence human behaviour, including work performance, according to a study by Korir (2013) on the factors impacting reverse logistics performance at commercial banks in Uasin Gishu County. The study found a relationship between organisational culture and employees' perceptions of their need to support reverse logistics, but this obligation was greatest among those who agreed with the practise of reciprocity in employee-employer interactions. Finally, financial institutions must meet the demands of their staff, according to Wamalwa's (2011) examination into the effect of organisational culture on the results of reverse logistics practises, specifically in commercial banks in Bungoma County. The study also found that the way an organisation responded to reverse logistics practises, professional needs, and employee attitudes all had an impact on how well it survived.

CONCLUSION

Reverse logistics' impact on a firm's survival and the function of organisational culture were both subjects of the study.

Reverse logistics was found to be practised in these businesses primarily through aspects including remanufacturing, reusing, recycling, repackaging, redistribution and resell, repair, and reconditioning.

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Reverse logistics was found to have less of an impact on organisational survival than organisational culture, as was witnessed after the introduction of organisational culture. According to this, a company's culture may act as a mediator in the connection between reverse logistics and a company's ability to survive. It was crucial to understand the factors that affect an organization's survival, organisational culture, and reverse logistics in order to better comprehend the factors that affect a firm's expansion.

Practical Implications:

1. The findings of the study provide insights into the relationship between organizational culture and reverse logistics performance. This knowledge can guide Ghanaian firms in developing and implementing effective reverse logistics strategies, processes, and systems. By fostering a positive organizational culture that values efficiency, innovation, collaboration, and continuous improvement, firms can enhance their reverse logistics practices, leading to improved product recovery, cost reduction, and customer satisfaction.

2. Understanding the impact of organizational culture on firm survival in the context of reverse logistics can help Ghanaian firms develop strategies to enhance their competitiveness and long-term viability. By fostering a culture that supports adaptability, customer focus, and employee engagement, firms can improve their ability to navigate challenges, capitalize on reverse logistics opportunities, and sustain their operations in the face of changing market conditions.

3. The study sheds light on the relationship between organizational culture and employee engagement and job satisfaction within the reverse logistics function. By creating a positive and supportive culture, firms can promote employee motivation, job satisfaction, and commitment. This, in turn, can lead to higher productivity, reduced turnover, and a more skilled and dedicated workforce in the reverse logistics domain.

Social Implications:

1. Reverse logistics plays a vital role in minimizing environmental impact by facilitating product recovery, recycling, and responsible disposal. By examining the role of organizational culture, the study encourages Ghanaian firms to adopt more sustainable practices within their reverse logistics operations. A culture that promotes environmental consciousness and responsibility can contribute to reducing waste, conserving resources, and mitigating the ecological footprint of reverse logistics activities.

2. A positive organizational culture that emphasizes customer-centricity and responsiveness has a significant impact on customer satisfaction and loyalty. By understanding the influence of organizational culture on customer experiences during the return process, firms can improve customer satisfaction and build stronger

relationships with their customer base. Satisfied and loyal customers contribute to the long-term success and survival of firms in Ghana's reverse logistics landscape.

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