

# Supply Chain Management Integration and Value Creation among Ghanaian 3-Star Hotels in the Bono Region

Justice Ray

Achoanya Ayam

Former Finance Officer,  
Catholic University College of  
Ghana, Fiapre, Bono Region,  
Ghana

Susana Kusi

Kwame Nkrumah University of  
Science & Technology,  
Institute of Distance Learning,  
UPO, Ghana

**Correspondence:**

suekusi85@gmail.com

ajrayam@yahoo.com

+233-20-816-7987

+233-24-311-2606

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**Abstract**

In today's global smart world and digital information age, supply chain management integration (SCMI) and collaboration in the hospitality industry is of critical importance in achieving value creation and efficiency. The Importance of an integrated supply chain management (SCM) influence on services rendered and the resulting impact in creating value for businesses in the value chain is a known phenomenal. In this study we explore the influence of SCMI on value creation in 3-Star hotels in the Bono Region of Ghana. The study employed quantitative survey research methodology with data collected from a sample of 32 employees and 92 customers of the 3-Star hotels in the Bono region of Ghana using structured survey questionnaire. We identified the value of strategic supplier partnership, inventory management and lean practices as optimal in creating value in the integration process. The study further reveals an overall positive significant relationship between SCMI and value creation for 3-Star hotels in the bono region of Ghana. Three factors namely: strategic supplier partnership, inventory management and lean practices were significant in predicting best fit equation for value creation. The study was restricted to only 3-Star hotels located in the Bono region of Ghana, their staff and customers. The study recommendations should assist industry players to appropriately review SCM practices in 3-Star hotels in Ghana and such practices effect on value creation, and to also formulate a step-by-step implementation guide for future adoption. The study further contributes to the body of knowledge in SCM practices in Ghana's hospitality industry.

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**Key words:** Supply Chain Management Integration, Value Creation, Hotels, Hospitality Industry, Ghana.

**Introduction**

The Three-Star Hotel industry in Ghana is vitally acknowledged as drivers of economic growth in emerging economies such as Ghana. The industry has

contributed and continue to play a major role in the economic development in spite of the recent COVID 19 disruptions. The tourism industry as a whole contributed \$3.8 billion US dollars in foreign exchange earnings in 2019 to the country's economy (Knoema, 2021). In view of the industry's past contribution to the Ghanaian economy, the industry's potential to propel feature economic growth and job creation is not in doubt. Furthermore, past studies (Nomnga, 2021; Li, Jin & Shi, 2018; Hole & Snehal, 2019) have alluded to the importance of the hospitality industry to economic growth and alleviating poverty. However, the hospitality industry's viability and sustainability strongly depend on industry players ability to strategically fully integrate SCM practices in a strategic manner in order to create value that eventually meet customer demands (Rosa Hendijani & Reza Saeidi Saei, 2020).

With the current global smart world dynamics and information age, SCMI is a key driver to creating value and attracting potential consumers along the value chain (Rejeb & Keogh, 2021; Yu, Li, Wang & Duan, 2019). In the USA, Europe and Asia businesses are focusing more attention on rapid development of digital technology enablers of SCMI that create value (Bhandal, Meriton, Kavanagh & Brown, 2022). These emerging are helping to improve efficiency and create more collaborative operating models. On the contrary, according to the West African Institute of Supply Chain Management (WAISCM), businesses and policymakers in West Africa, including Ghana, continue to underestimate the strategic importance of supply chain management (SCM) in today's world, and as a result, continue to suffer largely due to the failure to apply SCM principles to business activities (Mensah, Diyuoh & Oppong 2014).

SCMI refers to the strategic collaboration between upstream and downstream partners along the value chain in order to harmonise resources and capabilities for the mutual competitive advantage of partners across the entire supply chain (Zhu, Krikke, & Caniels, 2018). Value creation refers to synergistic effect derived through member's collaborative effort in producing and delivering products that meet customer demands (Simatupang & Sridharan, 2018). SCMI needs a common platform to co-run the chain of activities that affects the value chain, hence the need for the partners to jointly develop such platforms for their mutual benefits. Both SCMI and value creation are of immense importance in supply chain (SC) practices, and as such requires every member's collaboration in the SC to achieve its full potential. SCMI and value creation has generated noticeable interest among industry players, scholars and entrepreneurs (Avelar-Sosa, García-Alcaraz & Maldonado-Macías, 2019); Maheshwari, Gautam & Jaggi, 2021); Chalmeta & Santos-deLeón, 2020). However, previous empirical studies focused extensively on the processes and practice of SC with minimal focus on how SCM factors collectively contribute to integration and value creation. This study is thus motivated by this obvious research gap in the literature hence our interest in investigating the impact of combined influence of the factors of SCMI on value creation in the prestigious 3-Star hotels in Ghana. The fundamental question will be, what are those SCMI factors that collectively impact significantly on value creation? In this paper, we consider these individual SCMI factors and assess their combined influence on value creation from the context of collaborations in 3-Star hotels in the bono region of Ghana.

Three research questions (Rs) and their related hypothesis arise namely, R<sub>1</sub>: What is the relationship between the SCMI factors and value creation? R<sub>2</sub>: What is the level of impact of the factors of SCMI on value creation? R<sub>3</sub>: What is the relative strength of combined SCMI factors contribution in achieving best fit equation for 3-Star hotels value creation in the bono region of Ghana? The related hypothesis: H<sub>0</sub>: there is no relationship between the combined effect of SCMI and supply chain value creation among 3-Star hotels in bono region of Ghana, and H<sub>1</sub>: there is a relationship between the combined effect of SCMI and supply chain value creation among 3-Star hotels in bono region of Ghana.

This paper is organised as follows. In Section 2, we review the relevant literature. Section 3 discusses the methodology of the study. In Section 4 we analyse and discuss the results. Section 5 concludes the study with practical recommendations and future research directions.

## Literature Review

The literature review mainly focuses on the conceptual and empirical aspect in the following key areas: SCM concepts, SCM integration, value creation and SCM practices in the hotel industry.

## Supply Chain Management Concepts

The fundamental objective of SCM according to Zhao and Hou (2021), enhances throughput while at the time systematically reducing both inventory and operating expense. Throughput in this context refers to the frequency of occurrences sales, depending on the market under consideration (Hugos, 2018). In certain markets customers' value are willing to pay high prices for high levels of services, while in other markets customers will prefer the lowest price. As stipulated by

Kozak, Madlenak and Neszmelyi (2020), industries and businesses such as 3-Star hotels may define their supply chain capabilities in five distinct areas: production, inventory, location, transportation and information. These areas envisioned as performance drivers to be managed so as to produce the capabilities required any given supply chain (Piya, Shamsuzzoha & Khadem, 2020). The concept of SCM practices according to Min (2021), first emerged in the mid-1980s, incorporating interorganizational operations management, system integration, and information sharing. However, many studies (Al Humdan, Shi & Behnia, 2020; Nayak & Choudhary, 2020; Barykin, Kapustina, Sergeev, Kalinina, Vilken, de la Poza, ... & Volkova, 2021) have stated that the concept of SCM can be attributed to physical distribution and logistics.

The concept of SCM as articulated by Frazzon, Rodriguez, Pereira Pires and Uhlmann (2019) suggest that SCM emphasises the coordination, collaboration, and relation among members, and in three dimensions namely; activity and process administration, interfunctional and interorganizational coordinations. Dolgui Ivanov and Sokolov (2020) re-echoed the dominant theory backing supply chain to be two major areas, first; structure, configuration, and coordination; and the second, strategy, governance, and power. According to Sharma and Khanna (2020), the key point in SCM practices relates to the entire process being viewed as one system encompassing all the critical processes that leads to creating, sourcing, production and deliver in line with demand. To attain supply chain competitive advantage all players should work together, deploying appropriate technological tools in gathering information relating to the demands of the

market as well as exchanging information among members along the value chain (Di Vaio & Varriale, 2020). Di Vaio and Varriale (2020) emphasised that the concept of SCM practices encompasses managing all activities involved in the supply and acquisition, including logistics management activities, coordination and collaboration with partners; such as suppliers, intermediaries, third-party companies and consumers in the value chain.

### Supply Chain Management Integration

SCMI refers to the extent to which businesses strategically collaborate with their suppliers in the management of inter- and intraorganizational processes in the value chain (Kang, Yang, Park & Huo, 2018). Past studies on SCI (Hasim, Fauzi, Endut, Yusof & Ridzuan, 2020; Sayan, Çalpınar & Koç, 2021; O'Connor, Lowry & Treiblmaier, 2020) rightly indicated that the concept emphasises the integration of information among suppliers, manufacturers, distributors, and customers. Some definitions of SCMI stressed on material flows their components, while some others focused mostly on information, resources, and cash flows (Jia, Blome, Sun, Yang & Zhi, 2020). Many of the benefits arising from businesses that have implemented SCI includes: improved financial performance, enhanced customer satisfaction and growth in market share (Zhao, Wang & Pal, 2021; Madhani, 2020; Li, Chen, Wu, Hung & Lin, 2020).

Generally, SCI is made up of internal and external integration (Prajogo, Toy, Bhattacharya, Oke & Cheng, 2018). Internal integration consists of the extent to which the businesses organize its internal activities, processes, and strategies aimed at meeting the needs of customer (Zhang,

Lettice, Chan & Nguyen, 2018). The process involves collaboration and coordination across the entire organizational functions by way of information sharing in order to better appreciate and prescribe solutions to the needs of customers (Helo & Hao, 2019). While according to Mehdikhani and Valmohammadi (2019), external integration deals with collaboration and coordination between businesses and their external supply chain partners. Different approaches have been adopted in categorizing external integration. External integration is either categorized into supplier and customer integration which involves coordinated and pragmatic links between businesses and their suppliers or/and customers (Homchant, 2019; Hendijani & Saeidi Saei, 2020; Afshar, & Fazli, 2018), or into product and process dimensions Perdana, Ciptono & Setiawan, 2019) which handles the participation of suppliers and customers in developing new products (Huo, Ye, Zhao & Zhu, 2019; Dubey, Gunasekaran, Childe, Papadopoulos, Luo, Wamba & Roubaud, 2019). Process integration promotes cohesion, interdependency in the implementation of the supply chain processes incorporating suppliers and customers with the sole aim of eliminating non-essential activities and enhancing the speed of information flow, material supply and cash flow requirements along the supply chain (Zhang, Guo, Huo, Zhao & Huang, 2019).

### Value Creation

As stated by Reklitis, Sakas, Trivellas and Tsoulfas (2021), value creation is the process where the capabilities and competencies of partners in a supply chain are combined create an improved competitive advantage from one or more of the partners in the SC relationship. For

instance, value creation arises when a supplier gains new ideas or other valuable inputs from its customer firm (Stare, & Jaklič, 2020). As stated by Castañer and Ketokivi (2018), two types of value creation principle in SC relationship emerge: sequential interdependence and reciprocal interdependence. Supply chain managers requires enhance comprehensive approach in coordinating competencies and combining knowledge across the corporate sphere. As observed by De Regt, Barnes and Plangger (2020), the process of value creation comprises other segments apart from the nature and type of dependence or interdependence existing among the businesses in the value chain. Such components may be objectives the relationships goals, the coordination direction, and the nature of the value-creation initiatives all needs to be incorporated in developing comprehensive and objective task-oriented model.

The basic goal of SCM is to integrate and manage the procurement, flow, and control of materials across many departments and layers of suppliers from a complete systems perspective (Abdallah, Obeidat & Aqqad, 2017). With the goal of optimising the order fulfilment process, SCM has moved its focus from production efficiency to customer-driven and partnership synchronisation approaches (Bititci, Martinez, Albores-Barajas & Parung, 2017). The purpose of hotels, like any other business, is to make money by providing excellent service to consumers at reasonable prices. As firms grow more integrated into supply networks, value becomes more complicated and multidimensional (Hague & Islam, 2015). Internal value, often known as shareholder value, refers to an increase in profits that supports the company's financial goals and the SC partners' further growth. When the

strategic priorities of SC partners are converted into SC objectives, they can be implemented as SC operations, according to Kaliani, Chandran and Awais (2016). As stated by Lagat, Koech, and Kemboi, (2016), in order to smooth SC operations and act in accordance with the chosen SC strategy, the relevant capacities and inventories must be effectively positioned. According to Spina, Di Serio, Brito and Duarte (2015), these capacities and inventories make up the SC structure, which must be improved in order to attain high SC performance. Krikke (2020) relates the creation of internal value to the SC design, which focuses on the design of the SC strategy, structure, processes, operations, and management elements to achieve the market objectives.

External value on the other hand provides high quality products that meet customer needs of price, service, and image (Martínez-Olvera, Davizon-Castillo, Tozan & Erturk, 2015). Xiao, Wilhelm, Vaart and Donk (2019) explain that the success or failure of the SC is ultimately determined at the marketplace by the end consumer. Jona-Lasinio, Manzocchi and Meliciani (2019) also points out that the service provided to the end customer is determined by the effectiveness and efficiency of the cooperation of all the partners within the SC. Therefore, in this customer-oriented context, the SC as a whole must focus on providing the customer with what they want, how they want it, where they want it, and when they want it (Classen & Friedli, 2019).

### Supply Chain Management in the Hotel industry

Suppliers of raw materials, components, and services (such as expertise and especially skilled labour) to the luxury accommodation industry can be a source of

power to the business. The luxury accommodation industry is highly dependent on its suppliers as quality needs to be assured (Koech & Ronoh, 2015).

Contracted suppliers must deliver both fast and high standard inputs. Intercontinental hotel group in the United States recognises the significant role it plays in the local economic development. Goods and services are sourced locally in order to support local suppliers (Maalouf, 2018). The intercontinental hotel also understands the need to promote responsible business practices by those same suppliers (Manha & Tukamushaba, 2015). According to the CBRE research special report of 2009, most five-star hotels in China operate under the pure management business model (Xu & Gursoy, 2015a). With this model, hotel operators usually act as agents running the hotel business for the property owners who are mostly domestic developers. The hotel owners pay management fees to hotel operators based on profits and revenues, and other pre-agreed expenses like marketing and royalty fees. International brands in China which run most of the five -star hotels maintain a competitive edge over most domestic operators in terms of their global networks, marketing and reservations systems.

Manufacturing and service supply networks are the two most common types of supply chains identified in the literature on SCM. The former is described as the inbound and outbound service experiences supplied to consumers by firms, whilst the latter is defined as the process by which units are changed from raw materials into goods and sold to end-consumers (Carter, Hatton, Wu, & Chen, 2019). Manufacturing and services supply chains which forms part of most hotels value chain according to Xu and Gursoy (2015a), refers to as a link of

hotel businesses carrying out different activities such as supply of product or services components, including raw food ingredients, equipment and furniture; and the distribution and marketing of the final services to customers of such hotel businesses. Hence, managing hotel supply chain extends beyond procurement and logistics and differs from the typical SCM practice in six forms. The First unique feature is that hotel products are perishable in nature comes with lower product variable cost compared to the fixed cost (Zhang et al., 2019) hence, managing the revenue streams becomes extremely important for hotel businesses. Secondly, hotels generated customer demand is critical especially in terms of favourable word-of-mouth (Gandhi, Sachdeva & Gupta, 2019). The third feature is the fact that, hotel products is most cumulative result of a variety of providers, mostly described as a closed-loop system (Xu & Li, 2016). Fourth, hotel demand is unclear due to fierce rivalry among hotel firms and the industry's vulnerability to external variables such as weather. Fifth, the systematic production and consumption of the hotel services affects logistics. Finally, collaboration among hotel and their allied partners is critical as multiple services provided by businesses in the value chain can be offered to customers as a package at the least cost.

## Methodology

The study used quantitative research design approach in achieving the study objectives. The approach enabled us to develop the research objectives and subsequently derive the appropriate research questions and then design a research strategy to answer the study research questions. Past studies on SCMI (Le, Wu & Zhong, 2021; Arifin, Ibrahim & Nur, 2019; Tang, Chau, Ip & Ji, 2022) have widely established the

importance of quantitative research design and its relative reputation measuring the four SCMI independent constructs (strategic supplier partnership, information sharing about products and targeting strategies, inventory management and lean practices) effect on the dependent construct (value creation). The research again considered quantitative technique as more ideal technique due to the possible generalization of the research result (Pandey & Pandey, 2021).

The study is descriptive with practical purposes. The statistical population of the research included 3-Star hotels in the bono region of Ghana. The research data was obtained from CEO/managing directors, general managers, senior managers, managers, accounts officers/accountants, procurement/purchasing, inventory and logistics officers as well as experts in the hotel industry with related task functions. All 3-Star hotels within the bono region were considered in the study sample (Ligon, Stoltz, Rowell & Lewis, 2019). A purposeful sampling technique was used to select the employees sample size of 32 from a population of 56 staff of the two hotels due to the specific skills set and competences required of the research focus. On the other hand, a simple random sample size of 92 was computed from an estimated population of 192 customers who were either resident or visited the two 3-Star hotels within the period of administering the questionnaire.

The study used a self-designed validated survey instrument in the data collection. The data was mainly obtained through emails from subject experts from the procurement and supply chain, finance and other related departments of the two 3-Star hotels. The instrument validation process involved ten subject area experts from the procurement and finance departments of

two other hotels reviewed the research instrument in order to find any possible deficiencies in the instrument structure, wording, syntax and construct. The revised instrument based on the feedback received was again piloted among 10 subject area experts from tertiary institutions within the bono region. Their feedback resulted in a few minor edits mostly related to the instrument wording and syntax errors before the instrument was eventually administered to participants. We further conducted a test-retest reliability from among 10 respondents in the sample over a 7-day period. The reliability test results produced a coefficient of  $r = .87$ , which was well above the acceptable construct validity correlation coefficient of  $r = > 0.5$  (Heale & Twycross, 2015).

The survey consisted of 52 and 47 questions for the hotel staff and customers respectively with a 5-point Likert scale to measure 3-Star hotels SCMI influence on value creation of with six questions for each section. Similar previous studies on SCMI influence on value creation (Xu & Gursoy, 2015b; Al-Ababneh, Al-Sabi, Al-Shakhsheer & Masadeh, 2017) informed the choice and structure of the instrument for the study. Two separate questionnaires were designed for the study: one for customers and the other for employees. The questionnaire for hotel customers had sections for; demographics of respondents, patronage of hotel services by respondents, SCMI practices and value creation. The questionnaire for employees dealt directly with identifying SCMI practices at 3-Star hotels in the region. This comprised sections for demographics of respondents, hotel SCMI practices and value creation. The data collected was subjected to statistical analysis using descriptive statistics, correlation, and regression

analysis to ascertain the significance level of the study attributes of hotels SCMI practices and value creation.

## Results and Discussions

The results and discussions primarily focus on the following key areas: the relevant study demographics, the descriptive statistics, the correlation analysis, the regression analysis and the discussion of the results.

### Demographic Statistics

The results as presented in table 1 indicate that 47 of the respondents had HND and/or first degree, 25 had other academic qualifications (diploma, certificate, professionals) whereas 10 of the respondents held secondary school certificates or master's degree. The analysis further revealed that the 2 General Managers of the participating hotels responded to the questionnaire, 6 senior managers, 7 managers and 7 accounts officers also provided responses to the study questionnaire. The highest number of responses of eleven was received from purchasing clerks for the participating

hotels, The analysis further showed that 5 of the respondents had less than 1-year professional experience, 12 of them had 1 to 5 years professional experience, 11 had 6 to 10 years professional experience whereas 4 had over 10 years professional experience in their respective professions. The study requested respondents to indicate the number of days they stayed in the participating hotels. As shown in the analysis, 42 of the respondents were at the hotel for less than 3 days, 33 of the customers stayed 3 to 5 days at the hotels and 10 of participants stayed 1 to 2 weeks, while 7 of respondents stayed more than 2 weeks at the hotels. Finally, customers were requested to indicate the services of value in the hotels that attract them. The results indicated that 44 of the customers found conference rooms as their service of value, followed by business centre with 17 of the respondents identifying it as the service of value and 11 chose fitness centre (gym) as their service of value. Other services of value to customers included Swimming Pools (5), Kids Club and other kids' friendly activities (4), Spa (3), Transport (4), Casino (1) and restaurant and bar (2).

**Table 1. Respondents Demographics**

Demographics	Hotel Staff		Hotel Customers		N
	frequency	Percent	frequency	Percent	
<b>Educational Background</b>					
Secondary	5	16	10	11	124
HND/First Degree	21	66	47	51	124
Master's degree	3	9	10	11	124
Other (Diploma, Certificate, Professionals)	3	9	25	27	124
<b>Position</b>					
CEO/ Managing Director	-	-	-	-	32
General Manager	2	6	-	-	32
Senior Manager	6	19	-	-	32
Manager	7	22	-	-	32

Accounts Officer/ Accountant	6	19	-	-	32
Purchasing, Inventory, Logistics etc.	11	34	-	-	32
<b>Professional Experience</b>					
Less Than 1 year	5	16	-	-	32
1 - 5 years	12	38	-	-	32
6 - 10 years	11	34	-	-	32
Over 10 years	4	13	-	-	32
<b>Days spent in the hotel</b>					
3 to 5 days	-	-	42	46	92
6 to 9 days	-	-	33	36	92
10 days to 14 days	-	-	10	11	92
More than 2 weeks	-	-	7	8	92
<b>Services of Value in the Hotel</b>					
Transport	-	-	4	4	92
Casino	-	-	1	1	92
Swimming Pools	-	-	5	5	92
Conference	-	-	44	48	92
Spa	-	-	3	3	92
Kids Club and other kids' friendly activities	-	-	4	4	92
Business Centre	-	-	17	18	92
Fitness Centre (Gym)	-	-	10	11	92
Club	-	-	2	2	92
Others	-	-	2	2	92

**Source:** Authors' analysis from Survey data

### Descriptive statistics.

The results of the descriptive analysis showed that the mean values of all the SCMI factors were fairly distributed ( $M = 2.18$ ,  $SD = 0.88$ ), ( $M = 2.61$ ,  $SD = 0.97$ ), ( $M = 2.53$ ,  $SD = 0.87$ ) and ( $M = 2.06$ ,  $SD$

$= 0.98$ ), with an average variance and range at ( $Var = 3.15$ ,  $Range = 0.72$ ). The test of skewness between the factors adequately normal for the purpose of this study. Table 2 provides the details.

**Table 2. SCMI Determinants**

Variable	<i>N</i>	<i>M</i>	<i>SD</i>	<i>Var</i>	Skewness	Range
Strategic Supplier Partnership	124	2.18	0.88	3.23	0.25	0.78

Information Sharing about Products and targeting strategies	124	2.61	0.97	3.26	-0.05	0.73
Inventory Management	124	2.53	0.87	2.92	0.29	0.67
Lean Practices	124	2.06	0.98	3.18	-0.03	0.69

**Source:** Authors' analysis from Survey data

### Correlation Analysis

The correlation results of four variables: hotel strategic supplier partnership, hotel inventory management and lean management practices promote fair and reasonable pricing of services and products, hotel supply chain practices continue to influence the good image of the hotel and its patronage and hotel provides quality products and services due to its information sharing and feedback system being practiced, showed medium to low positive correlation effect of  $r = .294$ ,  $r =$

$.260$ ,  $r = .170$  and  $r = .169$  respectively. The statements; hotel supply chain practices Promotes Integration, effective inventory management and Influences Performance along the Value Chain and hotel supply chain practices Influence Brand Quality, showed negligible correlation effect of  $r = .122$ ,  $r = .119$  respectively. The relative degree of association between the statements relating to the independent variables (statements) and the dependent variable (value creation) was significant at  $p < .01$  and  $p < .05$  (see table 3 below).

**Table 3. Summary of correlation Analysis**

Variable	1	2	3	4	5	6	7	M	SD
(1) Value Creation	-	.294**	.260**	.169*	0.122	0.119	.170*	2.33	1.08
(2) Strategic Supplier Partnership	.294**	-	.704**	.190*	.396**	.361**	.327**	1.88	1.12
(3) Lean Inventory Practices.	.260**	.704*	-	.183*	.380**	.393**	.208**	2.81	0.75
(4) Information Sharing about products and services	.169*	.190*	.186*	-	0.015	.685**	.225**	2.17	0.81
(5) SCM Practices Promote	0.122	.396**	.380**	0.015	-	0.124	.191*	2.49	1.21

Good Reputation (6) SCM Practices Influence Brand Quality (7) SCM Practices Promotes Integration, effective inventory management and Influences Performance along the Value Chain	0.119	.361**	.393**	.685**	0.124	-	.227**	2.26	0.91
<i>M</i>	2.33	1.88	2.81	2.17	2.49	2.26	2.01	-	
<i>SD</i>	1.08	1.12	0.75	0.81	1.21	0.91	0.70		

\* Correlation is significant at the 0.05 level (2-tailed). \*\* Correlation is significant at the 0.01 level (2-tailed)

*Source:* Authors' analysis from Survey data

### Regression Coefficient

From the analysis in table 4, the results showed an overall high level of significance of all the factors of SCM but one factor. The factors; strategic supplier partnership  $p = .001$ , inventory management  $p = .003$  and lean practices  $p$

$= .000$  revealed high significance levels of effect on value creation in the two hotels. Whereas the factor; Information Sharing about Products and targeting strategies with  $p$  value  $p = .171$  and beta weight of  $.101$  was found not be significant in influencing value creation in the two hotels. The details are found in table 4.

**Table 4. Regression Coefficient**

Variable	Coefficient	Std. Error	<i>B</i>	-95% CI	95% CI	<i>T</i>	<i>P</i>
(Constant)	-1.273	3.07		-10.535	7.374	0.407	0.000
Strategic Supplier Partnership	0.196	0.302	0.121	-0.497	0.750	2.504	0.001
Information Sharing about Products and	-0.087	0.22	0.058	-0.201	0.391	1.105	0.072

targeting strategies

Inventory Management	0.118	0.039	0.124	-0.025	0.177	2.700	0.023
Lean Practices	0.175	0.192	0.120	-0.554	0.287	0.853	0.000

**Source:** Authors' analysis from Survey data

### Best fit equation analysis

The results of the regression analysis revealed notable similarities with the results of the correlation analysis in relation to the variables with significant outcome and the degree of positive correlation. The best fit regression equation for financial sustainability is;

$$Y_{VC} = a + \beta_{SSP} + \beta_{IM} + \beta_{LIP},$$

Where  $Y_{VC}$  = value creation (predictor variable),

$a$  = constant value

$\beta_{SSP}$  = strategic supplier partnership (independent variable),

$\beta_{IM}$  = inventory management (independent variable), and

$\beta_{LIP}$  = lean inventory practices (independent variable).

Hence regression equation for  $Y_{VC} = 1.117 + 0.347\beta_{SSP} - 0.890\beta_{IM} + 0.383\beta_{LIP}$ .

The regression analysis determined the best regression equation by including all statements with coefficient higher than zero and  $p$  value of  $p < .05$  significant level which also supported the rejection of the null hypothesis ( $H_0$ ).

### Discussion

The study's results showed that the respondents were to some extent optimistic about the level of influence of the SCMI factors on the impact of value creation. Participants were generally unanimous about the successes of SCMI practices dependent on the value it creates and alignment with organizations goals and objectives. While previous research (Le,

Wu & Zhong, 2021); Hendijani & Saeidi Saei, 2020; Huo et al., 2019) sought to confirm the importance of these individual factors, the study findings present statistical evidence to support three of the four factors as having a statistically significant relationship. Previous studies on SCMI practices failed to adequately address the SCMI factors effect on value creation (Maalouf, 2018; Mufutau, Victor & Oladimeji, 2021). This study aimed to establish the extent of the relationship between the various SCMI factors influence on value creation of 3-Star hotels in the bono region of Ghana.

First of all, the study found that strategic supplier partnership, inventory management and Lean practices were significant in assessing the effectiveness of SCMI practices in 3-Star hotels in the region. On the other hand, information sharing about products and targeting strategies was found not to be significant in assessing the effectiveness of SCMI practices in the hotels. The study outcome is in contrast with the findings made by Arifin, Ibrahim and Nur (2019), Tang et al (2022), Janaki, Izadbakhsh and Hatefi (2018), and Masudin, Kamara, Zulfikarijah and Dewi (2018) which generally concluded that information sharing about products and targeting strategies was found to be significant in assessing the effectiveness of SCMI practices in hotels. Janaki et al., 2018 rightly corroborated the study outcome that strategic supplier partnership is influential

in assessing the effectiveness of SCM practices. The study found medium to minimal positive correlation between supply chain management practices and value creation in the two hotels in the bono region of Ghana. This outcome is corroborated by Nyakwaka (2021) who acknowledged the influence of SCMI factors on value creation in the hotel industry.

## Conclusion

The purpose of this study was to investigate the strength of the relationship between SCM practices on value creation among 3-Star hotels in the bono region of Ghana. Three of the factors namely: strategic supplier partnership  $p = .001$ , inventory management  $p = .003$  and lean practices  $p = .000$  emerged as significant determinants of effective SCMI practices and on value creation of 3-Star hotels in the bono region of Ghana. However, Information Sharing about Products and services had no significant relationship and effect in determining the adoption and implementation of SCMI practices and its long-term effect on value creation. The study found an overall significant relationship between SCMI practices and value creation for 3-Star hotels supported with an all-embracing SCM implementation strategy well aligned with the hotel industry specific practices.

## Recommendations

The study outcome reveals a number of useful practical recommendations based on the conclusions on the factors of SCMI practices and value creation which is worth exploring by practitioners.

1. The findings showed strategic supplier partnership, inventory management and lean practices had medium to minimal positive correlation on value creation. The management of the hotel should

aim at strengthening these key influential factors in order to achieve optimum efficiency. This can be realised through regular training and the deployment of ICT tools in the supply chain management systems of the hotels and in building credible database of suppliers to facilitate timely free flow of information between the hotels and their suppliers.

2. The practice of information sharing about products and targeting strategies was identified by the study to be weak in the hotels. This can be resolved by the hotels keeping accurate database of suppliers, which would enable the hotels to disseminate information about new products and seek the input of the suppliers before final implementation. Making strategic suppliers to feel part of the hotel's decision would make them feel part of the company and hence make them provide quality and affordable supplies to the Hotels.

## Future Research Opportunities

There is substantial future research opportunity worthy of examination in the area of SCMI practices and value creation. Some of the areas worthy of recommendation include:

1. Research scope: The scope of further research should be widened to include all 3-Star hotels in Ghana in order to provide a better overview of the extent of implementation, challenges as well as benefits of deploying SCM practices in hotels in Ghana.
2. Mixed research methods of data

- collection could be considered for any further research on SCM practices in hotels in Ghana.
3. In subsequent studies, it is recommended that the population should be increased to include other categories of hotel ratings

such as one star and two star rated hotels in the country. Attention should also be given to suppliers in the industry hence the population and sample size for future studies should include suppliers of goods and services in the hotel industry.

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