



# Information Communication Technology as a Strategic Resource in Enhancing Business Performance of Small Hotels in Ghana

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## Authors' contributions

This work was carried out in collaboration among all authors. Author IFO designed the study, performed the statistical analysis, wrote the protocol and wrote the first draft of the manuscript. Authors EP and SA managed the analyses of the study. Author ASK managed the literature searches. All authors read and approved the final manuscript.

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## ABSTRACT

Information communication technology as a business-enhancing strategy to improve business is on the ascendancy. However, a survey in 2016 visualises that 70% of the hotels especially the small hotels across the globe follow the old marketing practices due to poor marketing. Ghana is not exempted from these strategies, as small hotels appears to be operating but in reality, are just adding to hotels number. With a population size of three hundred and sixty-nine, the study seeks to investigate the strategic uses of information communication technology as a resource and its influence on hotel business. The result from respondents indicates that, the strategic use of information technology as a resource by the small size hotels influence performance. Some of the business information communication technology impact is online reservations, communication with guests and improvement in service quality that leads to customer satisfaction. Above all, it offers many options for small hotels in capturing their market space online using information communication technology.

**Keywords:** Information communication technology; internet; hotel; strategies; performance.

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## 1. INTRODUCTION

Information technology (IT) has played a vital role in the expansion of the hotel industry due to consumer behavior patterns such as communication, setting up business relationships, having information about new products/services, less luxurious spending, deep recession and fear of the unknown future. For these reasons, hoteliers will need to look at numerous strategies to attract, maintain and 5 customers. One of such strategies is the proactive use of IT in the hotel business to enhance the hotels' performance [1]. This has resulted in competition among businesses and one that can access the information fast, with ease and transfer the information fast can survive. The emergence of information technologies and especially the internet contributed to the development of product/service advertising, marketing, communication both in and out of organizations. The product in hotel businesses is intangible and the use of the internet is inevitable for informing the guests/customers about the products, accessing a large mass of people and setting up an effective communication system. Hotels' customers/guests' decisions on the type of accommodation, facilities etc. Selection in a quick and right way depends on their access to the right information fast. Internet usage has made it possible for hotel guests to access or research the hotels directly [2,3], make an online payment through the internet [4] directly in the hotel websites using a credit/debit card. Even though the hotel industry has some similarities in terms of products/services, the use of IT can differentiate the hotels from their competitors. Hence, internet usage has become inevitable in the competitive business environment these days [4]. This study is in seven sections and these are introduction, theoretical foundation, conceptual framework and hypothesis development, review of related literature, methodology, conclusion and appendix.

### 1.1 Theoretical Background

Understanding sources of sustained competitive advantage for firms has become a major area of research in the field of strategic management [5-7]. Firms obtain competitive advantages by implementing strategies that exploit their internal strengths, through responding to environmental opportunities, while naturalizing external threats and avoiding internal weaknesses [7]. Most researches on sources of sustained competitive

advantage have focused either on isolating a firm's opportunities and threats [6,8,9] describing its strengths and weaknesses [10-12] or analyzing how these are matched to choose strategies. To help focus the analysis of the impact of a firm's environment on its competitive position, much of this type of strategic research has placed little emphasis on the impact of idiosyncratic firm attributes on a firm's competitive position [13]. First, these environmental models of competitive advantage have assumed that firms within an industry (or firms within a strategic group) are identical in terms of the strategically relevant resources they control and the strategies they pursue [6,9,13]. Second, it assumes that should resource heterogeneity develop in an industry or group (perhaps through new entry), this heterogeneity will be very short lived because the resources that firms use to implement their strategies are highly mobile (i.e., they can be bought and sold in factor markets) [14,15].

For being competitive in market business, the resource-based approach introduced [7] resources as 'all assets, capabilities, organizational processes, firms' attributes, information, knowledge etc. are controlled by the firm for enabling them to conceive and implement strategies. To Marcus (2005), resources consist of financial capital (money form entrepreneurs, equity holders, bonds, banks and retained earnings) and physical capital (plant, equipment, land, natural resources, raw materials, computer hardware and software, manufacturing robots, automated warehouses, semi-finished goods, by-product waste, unsold stock of finished goods and other tangible property). The resource-based analysis of competitive advantage comes from two basic empirical generalization. First, there are systematic differences across firms in the extent to which they control resources that are necessary for implementing strategies. Secondly, these differences are relatively stable.

The basic structure of the resource-based perspective emerges when these two generalizations combined with fundamental assumptions are largely derived from economics. These assumptions are; (1) differences in firms' resources endowments could cause performance differences and (2) firms seek to increase economic performance [16,17]. The firm must have competitive resource attributes in order to have any potential for competitive advantage [7]. First, it must be valuable, in the sense that it exploits opportunities and /or neutralize threats in

a firm's environment. Resources are valuable when they enable a firm to receive or implement strategies that improve its efficiency and effectiveness. Secondly, it must be rare among a firm's current and potential competition. If a firm's valuable resources are unique among a set of competing firms, those resources will generate at least some competitive advantages. Thirdly, it must be imitable and resources can be imperfectly imitable for one or a combination of three reasons. (1) Ability of a firm to obtain resources is dependent upon unique historical conditions; (2) Link between the resources possessed by a firm's sustained competitive advantage is causally ambiguous, and (3) Resources generating a firm's advantage is socially complex [7,18]. Lastly, there cannot be a strategically equivalent substitute for resources that are valuable but neither rare nor imperfectly imitable. Substitution created for a similar resource that enables it to conceive and implement the same strategies or create different resources for strategic substitute [7]. For these reasons, this study uses Barney 1991 typology of firms' resources to represent internal resources, i.e. IT usage to gain a competitive edge over other hotels.

## 1.2 Review of Related Literature

Extant investigation showed that entrepreneurial orientation (EO) is directly related to profit firm performance. The results of [16,17] entrepreneurially oriented strategy making and its relationships with strategy, environment, and firm performance showed entrepreneurial strategy making was strongly related to firm performance when it was combined with both proper strategy and industry forces. On the other hand, [19] also suggested that EO has a relationship among small firms in hostile environments – industry forces and proposed that only countries with specific cultural inclinations could arouse robust EO. Thus, experiencing competitiveness that is more global and the ability to produce a strong EO with entrepreneurs and firms. Hotel businesses belong to the service sector and information technologies usage is intensive because of the features of products (service) sold. Thus, IT has many big benefits for both the guest and the business alike. IT in hotel businesses provide advantages for the hotel, staff and guests as decreasing failures, conveying reports to the administration, meeting the demands of the guests promptly and satisfying. In this case, the entrepreneur has to take advantage of IT in enhancing business operations.

EO research on firm performance shows positive implications [20,21] and that each of the EO strategies has a crucial part to play. That innovation is linked to entrepreneurship because firms cannot continue to exist without being innovative in their dealings. According to [18] a firm that is proactive in introducing novel products and services always stays ahead of its competitors as well as set standards of operation for those operating within similar ventures and overcome industry forces. This enables the firm to gain a continuous competitive advantage and for gaining firms' higher performance. Another notion associated with entrepreneurship is risk-taking, proactiveness, competitive aggressiveness autonomy among others. Every venture involves a certain amount of risk-taking which may either be resource commitment or substantial returns on interest [17,22]. Risk-taking involves the preparedness of an entrepreneur or a firm undertaking a business venture in an anticipation of a significant return on the investment though not certain. Proactiveness refers to the aggressiveness in which an entrepreneur or firm seizes an opportunity and launch its' product or services in anticipation of capturing the market first [18]. The usage of IT in the hotel businesses has been increasing rapidly [4] as well as the entrepreneurs orientation about IT in positioning itself in a competitive market.

Information technology (IT) is a term that includes recording and saving of data, producing information after some processes, accessing, saving and transferring the produced data effectively and productively. This circumstance is based on three main principles and these are: Information must be obtained, saved and accessed when it is necessary. Information technologies first started its emergence with computers in 1954. With the signs of progress in the 1990s information technologies became one of the technology usages in a global competition environment, that the businesses can maintain their activities, expand market share, and take part in new markets [1,23]. The rise in the information sizes, complication in the processes, obligation to meet the demands and adaptation to the changing conditions have played a vital role in the emerging of these circumstances. In brief, rapid developments in information technologies during the last decades were noticed by many businesses because of their competitive advantages [2-4].

Internet is a name given to a group that is formed by information resources, which is a technology

created because there was a need of saving and sharing information that keeps increasing daily [23]. In its broadest meaning, the internet is a large global net that connects millions of computers, delivers communication with one another and accesses the information fast and easily. The first emergence of the internet as the military aim and the historical development is as follows:

Information technology has evolved over the past years since its emergence [24-26].

The internet has been in existence since 1960 and in 1969 the USA military of defense created a net called ARPANET (Advanced Research Project Agency) for defense and intelligence. Thus, communication among the nets connection (internetwork) created with the connection of local nets with this net. The activities of the virus led to the breakdown in 1980 and the activities led to modern internet concept emerged with BITNET (Because It's Time Network), created between two universities and countries outside the USA later demanded use as well. In 1982, the difficulties in the connection of the nets halted and it led to its acceptance as a standard. To determine the kind of organizations in the net, domain names such as com, edu, gov, etc. also led to the development in 1984 and accepted as standards. The World Wide Web (www), which is the fastest growing internet zone, emerged in the 1990s for commercial use and allowed in removing legal handicaps. HTML language (Hyper Text Markup Language) was developed and the ability of everybody designing webpages became possible. The development of the first internet browser, Mosaic in 1993 was an interface that enables people to surf the internet. The number of internet browsers has increased since the creation of Yahoo by two university students around 1994. From thence, the internet took its modern state with the chat software and search engines.

Electronic mail popularly known as **e-mail** is another operation done on the internet and is a digital letter sent on the internet. It is an electronic mail feature that computer users correspond with other mail users via the internet by sending any kind of file like video, image, music, document etc. to the recipient. Owing to its cheapness, ease of use and most commonly available, billions of e-mails are sent every day. Local Area Networks, known as **LAN**, allows computers within an organization connect with each other and **WAN**, that is Wide Area Network, is a physical large network that lets many

computers to connect one another. It allows internet usage in the widest area network. **Edi** is a structural electronic data exchange between different organizations usually used in e-commerce. **Intranet** is a network that is an internet-based application and connects only the computers within a certain organization, Local Area Networks (LAN) and Wide Area Networks (WAN) with each other. **Extranet** on the other hand is an open network that connects a business with its customers or other businesses with which it has the same targets. E-Commerce also lets commercial activities done in electronic media via internet and **specialized systems** are software that can develop themselves by taking collected data from natural people from an area of specialization. **ERP** means Enterprise Resource Planning or business resource planning is the general name for the connected administration systems that provide required resources like workforce for the production of goods and service, machine and materials. Internet, in effect, is the base for considering all kinds of information technologies [1].

### 1.3 Internet & Websites Usage in Hotel Businesses

The benefits of IT to a service organization, customers, and employees have been studied in widespread academic areas [4] in managing market complexity as a deliberate strategy for attaining competitive advantage [2-4]. IT enhances service quality [23,25,27], augments a firm's value chain [5], creates a competitive advantage [5] and improves the skills of the people who make up the service organization [28]. Functionally, IT usage in the hotel is in two levels; guest room technology and managerial/operation level. Concerning guest room technologies, the factions include various telephone lines, electronic meal ordering, self-checkout, self-wake-up systems and electronic and video entertainment services. In the managerial/operation level, IT assists the dissemination of information across departments of a hotel and between levels of staff [3,4].

A hotel can raise the intricacy of the market, thus discouraging its rivals from entering the marketplace by offering a variety of products at a range of process and by offering agents easier access to their products. On the other hand, it is suggested that hotels can lower the intricacy of the market for potential guests by offering easier access to more and better quality information, perhaps via multimedia information on CD-ROM, domestic booking systems or simply by providing

intermediaries with more online information [23]. Some hotels for instance, include the IT system into the main business and transmit important customer data to where it is needed to deliver customer service. IT systems can communicate information to the chain hotels' entire global network [2,3,29]. Law and Jogaratnam [29], studied IT applications in the hotel industry in Hong Kong and found IT as an essential component in the strategic planning process of the hotel business performance and improving customer service. Many hotels have adopted IT to improve business operations and the penetration of IT rate has generally increased. However, the level of IT usage was insignificant in small hotels in Singapore [30] and the small hotels in the UK were not making full use of IT capacity. [29], suggested that hotel managers need some training on IT proficiencies as well as inform technical computing professionals about the importance of business goals. IT can cause a shift in the structure of entire industries, lower certain barriers to entry while raising others, and help markets be more efficient by increasing the amount of available information [25,30]. [4] attest that the implementation of IT application in hospitality industry satisfy customers and increase competitive advantage for receiving travelers' information and accommodation booking and the hotel traveling customers had positive perception toward IT applications. These applications included efficient and effective hotel web site, in-room concierge services such as dining, concert, tour, and other information. On the other hand, quick check-in/check-out, in-room high-speed Internet access, precise and reliable website for gathering information and making reservations were important factors for business customers. In other to provide quality product/services, the hotel needs internet as in IT to reach its customers.

E-business and e-commerce, which are done on the internet, seem very indispensable because hotel businesses have the service business feature and this makes the World Wide Web (www) which is an area of internet very important. The www plays the role of a link between the guests and hotels in terms of gaining access to the written and digital information, visuals, pictures, tables, images, animations, videos and sounds. As a marketing target, the internet helps the guests to know about the services/products by providing productive communication with the guests. Through internet, guests get information about hotel services and at the same time compare it with the features of the other businesses without

any intermediary. This form of communication without an intermediary eliminates the commission given to the travel agencies and leads to a decrease in costs. Many international hospitality businesses use their websites to reach new markets, to inform about their products/services and to make an online reservation through their websites. Generally, there are benefits associated with the use of websites and the internet as some hotels have established to enhance business [1,2,4,29,31]. Its usage ensures;

- dominance in a competitive environment
- Reduce sales and marketing costs such as printed brochure and advertisement
- Increase hotels reservation demands
- Platform to inform, remind and convince the guests with their product/services,
- As a marketing research tool for hoteliers
- Opportunity to increase sales through e-commerce (e.g. online reservation and sales and advertising income)
- Reduce the payment for commissions given to travel agencies and tour operators
- Enhances effective marketing communication with the existing and potential guests
- A platform for continuous advertisement for product/service
- Technologically, it gives superiority against rivals in the business
- Supply information necessities for the business as well as reach the information fast
- Enable the hotel to reach its existing and potential guests faster and with less cost.

Running a hotel is never stress-free, especially, when globally there is a decline in spending over luxury due to changes in consumer behavior, traveling habits, food habits. This is a challenge that large hotels, chain hotels and small hotels are facing and with each having its share. Small hotels are smaller in size, generally located in urban settings, cost-saving in essence, but comfortable and upscale in their appearance, meant for quick, short stays rather than for a long, luxurious getaway, usually independent, autonomous and casual in operation as well. Again, small hotels more often than not stand-alone and have to succeed by themselves, therefore, making their presence felt in a market is always one of the biggest challenges that the management of small has to face. Comparatively, the management of the small hotel has its focus on too many functions as large brands and groups have separate wings

that focus on the management of the hotel, the operations and the administration. In small hotels, however, all functions have to happen in that hotel itself. This place a lot of pressure on management. Different classes and innumerable hotels available make it almost impossible for small independent hotels to establish market dominance, easily fall prey to market and demand fluctuations and changes in consumer trends. Despite their autonomous, small hotels are continually dependent on the fluctuating market environment. The one-on-one interaction makes it easier for guests to discover both - great as well as the poor service quality of the small hotel in minutes.

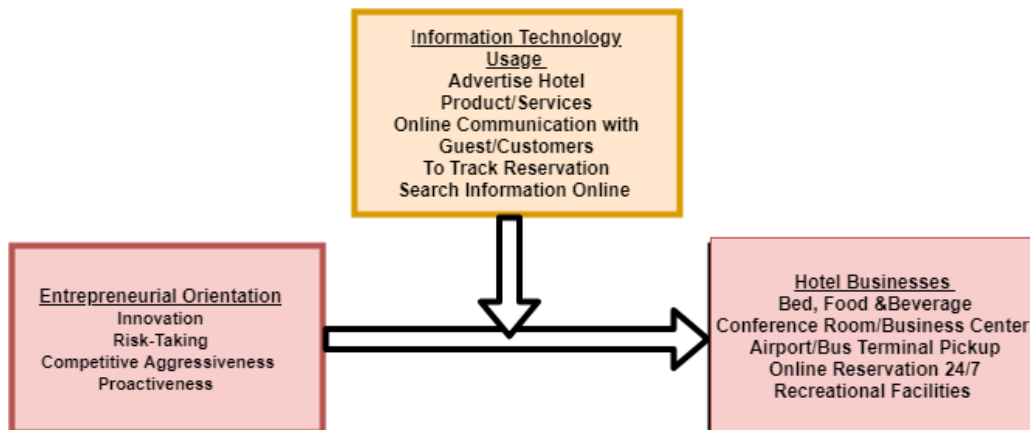
Small hotel (SH) is a type of business that provides accommodation, food, beverage etc. to people away from home. It usually employees one or more family members that are steering the affairs of the enterprise [32] and mostly managed by owners. Thus, the emphasis is not on the capabilities/ skills of the individual recruited but family ties and this sometimes results in less productivity. Given the fact that each large firm has access to resources, SHs too are able to identify opportunities, problems and handle it appropriately. This notwithstanding, entrepreneurs/owners/managers of SH hotels must identify barriers to their trade and improve on it. Though their sizes are small, they are very important in Ghanaian economies. In most cases, SH employs at least ten people, have less than 50 rooms, support the local economies as well as provide stable employment. If the only competitors for small hotels were other small hotels, smart management strategies would

suffice to safely pull them through to success [33,34].

As technology is improving day by day, there are many options available for the hotels in capturing their market space – ‘online’ using ICT. However, according to a recent survey in the year 2016, almost 70% of the hotels across the world still follow old marketing practices due to poor marketing strategies. With the increase in industry forces, small hotels need to utilize a resource strategically to gain competitive advantage. One of such resource is the use of ICT - online technology such as digital marketing & social media to effectively reach their potential customers [2,35].

Based on the review of the related literature in the preceding sections above, the conceptual framework of this study conceptualizes the relationship between IT usage and business performance for the small hotel industry in Ghana. The relationship is based on the resource-based view (RBV) theory that has seen a shift to accepting internal resources as sources of competitive advantage. Barney’s resource-based view defines overall resources as the combination of a firm’s tangible assets, intangible assets, and organizational capabilities. This theory proposes that organizations having valuable resources [7] can successfully implement business strategies to forge competitive advantage and subsequently enhance business performance [36]. A conceptual framework to examine the relationship between strategic uses of IT in the hotel business is proposed in Fig. 1.

**Conceptual Framework and Hypothesis Development:**



**Fig. 1. Conceptual framework**  
Authors' concept 2018

*Hypothesis 1: IT usage has a significant impact on the hotel business*

*Hypothesis 2: Entrepreneurial orientation has a significant impact on the hotel business*

## 2. METHODOLOGY

Statistically, 2,969 licensed hotel establishments in Ghana is categorized into star-rated, guesthouses and budget hotels (Ghana Tourism Authority 2016). There are ten regions in Ghana but Tema, a municipality in the Greater Accra Region is added to the 10 regions due to the high number of SH activities. In summary, there are 680 star-rated hotels – (only 3 Five Star Hotels, 12 Four Star Hotels, 39 Three Star Hotels, 223 Two Star Hotels, 403 One Star Hotels, 170 guesthouses, and 2119 budget hotels in Ghana. From the numbers listed, one could easily deduce the small hotels have a faster rate of springing up than the five and four-star hotels. For purposes of the research, the researchers separated the two-star hotels, one-star hotels, guesthouses and budget accommodations from the 5-3 star rated hotels and clustered them into three. Thus, the *Northern Cluster of Hotels* is made up of Brong Ahafo Region, Northern Region, Upper East Region, and Upper West Region. The *Middle Cluster of Hotels* comprised of Ashanti Region, Eastern Region, Volta Region and the *Coastal Cluster of Hotels* is made Greater Accra Region, Central Region and Western Region. A population size of two thousand nine hundred and fifteen (2915) small hotels across the country were put into three clusters, northern, middle and coastal. A systematic random sampling technique was used to select the required number of small hotels from each of the clusters. The population in this study is the owners/managers/entrepreneurs of SH in Ghana.

In other to undertake the study successfully, some ethical issues must be taken into consideration during the study [37]. The consent of all participants was sought and enough time given for participants to prepare and decide in advance, their willingness to either participate or not; and to avoid the deceitful notion they may have about the researcher [38]. A high degree of confidentiality in any information obtained from respondents maintained, while the anonymity of the respondents also guaranteed during and after the data gathering. Consent sought from individuals who provided information for their acceptance for purposes of the research

published in the future. The questionnaire was structured based on the literature review about the subject and quantitative methods were applied. The questionnaire items included demographic information in the first part and followed by five Likert scale questions about IT and the aim of internet/website usage. Appendix 1 of this study shows the various variables used as indicators for the study.

### 2.1 Data Analysis

The data obtained were tested and the analysis was conducted applying the AMOS software.

Fornell and Larcker [39] suggests that the square root of AVE in each latent variable used to establish discriminant validity if this value is larger than other correlation values among the latent variables. The square roots of average variances extracted (AVEs) shown on diagonal, in bold in Table 2. The table indicates that discriminant validity is well established.

### 2.2 Measurement Model

The measurement model was assessed by examining the internal reliability, convergent and discriminant validity [40]. The internal reliability was evaluated considering Cronbach's alpha ( $\alpha$ ) and composite reliability where the level of 0.70 is an indicator for acceptable internal consistency [41]. Convergent validity was assessed by an average variance extracted (AVE) and items loading with at least 0.50 of AVE for construct validity [40]. The loadings, AVE, composite reliability and Cronbach's alpha ( $\alpha$ ) presented in Table 3. Also seen from Table 3 that the calculated Cronbach's alpha ( $\alpha$ ) values ranged from 0.728 to 0.906 and composite reliability values ranged from 0.743 to 0.910, which supports strong internal reliability. Table 3 still shows that the estimated constructs loading ranged from 0.643 to 0.918 for Hotel Business, 0.626 to 0.886 for Information technology usage and 0.667 to 0.911 for Entrepreneurial Orientation. The AVE ranged from 0.620 to 0.671 are greater than the recommended levels.

Therefore, the conditions for convergent validity are satisfied in this study.

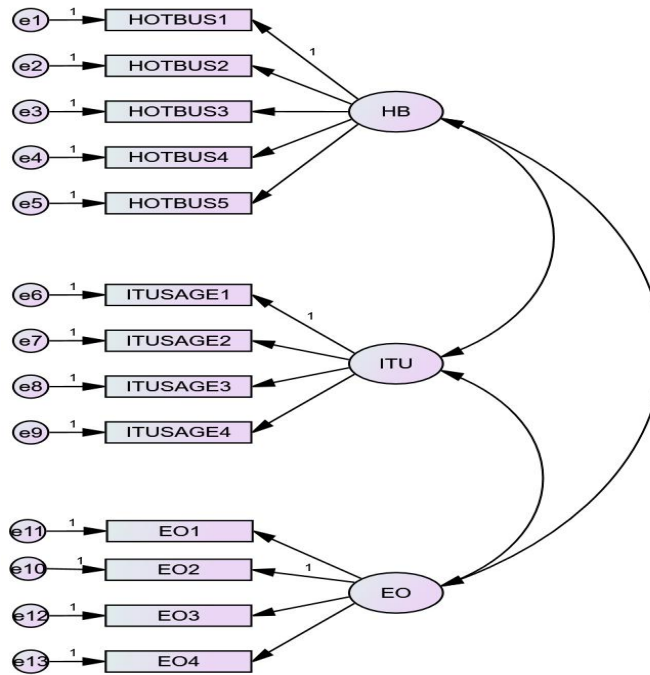


Fig. 2. Confirmatory part analysis

Table 1. Model fit measures

Measure	Estimate	Threshold	Interpretation
CMIN	230.282	--	--
DF	90	--	--
CMIN/DF	2.558	Between 1 and 3	Excellent
CFI	0.94	>0.95	Acceptable
SRMR	0.056	<0.08	Excellent
RMSEA	0.071	<0.06	Acceptable
PClose	0.134	>0.05	Excellent

Table 2. Model validity measures

	CR	AVE	MSV	MaxR(H)	HB	ITU	EO
<b>HB</b>	0.910	0.671	0.442	0.926	<b>0.819</b>		
<b>ITU</b>	0.888	0.667	0.442	0.908	0.665	<b>0.817</b>	
<b>EO</b>	0.743	0.620	0.129	0.913	0.251	0.359	<b>0.787</b>

### 2.3 Moderation Role of Information Technology

(M) moderates the effect of (X) or source characteristics (X) on (Y).

The model such that X's effect can be dependent on M, meaning that for different values of M, X's effect on Y is different. In generic terms, such a model can be written as:

$$Y = i_1 + f(M)X + b_2M + e_Y \tag{1}$$

where  $f(M)$  is any function of M. Consider a simple function of the form  $f(M) = b_1 + b_3M$ . This function of M looks like a simple linear regression model where  $b_1$  is the intercept and  $b_3$  is the slope or regression coefficient for M, except that rather than estimating some outcome variable from M, it is a model of the effect of X on Y. Substituting  $b_1 + b_3M$  for  $f(M)$  in equation (1) yields;



$$Y = i_1 + (b_1 + b_3M)X + b_2M + e_y$$

which can be expanded by distributing  $X$  across the two terms defining the function of  $M$ , resulting in

$$Y = i_1 + b_1X + b_2M + b_3XM + e_y \quad (2)$$

or, in terms of estimated values of  $Y$ ,

$$\hat{Y} = i_1 + b_1X + b_2M + b_3XM$$

where  $XM$  is a variable constructed as the product of  $X$  and  $M$ . The resulting equation is the simple linear moderation model, depicted conceptually in Fig. 3, and in the form of a statistical diagram in Fig. 4. It is a very valuable model, for it provides a simple means of

modeling data in which,  $X$ 's effect on  $Y$  is dependent on  $M$  or conditional, as well as an approach to testing hypotheses about moderation [42].

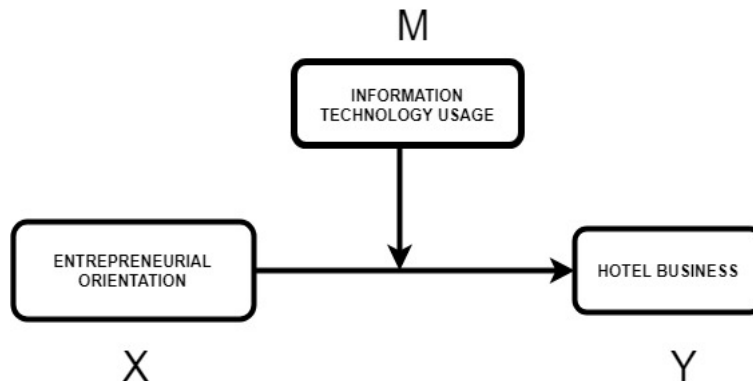
The interaction hypotheses are tested by first standardizing HB, EO, and ITU variables and then created product variables (EO\_X\_ITU). This interaction path (EO\_X\_ITU) was found to be significant at a 5% level as shown in Table 4. The graph of the interaction is depicted in Fig. 5. Thus, the results of the interactive relationship support the hypothesis.

The model as seen in (Fig. 3) supports the hypotheses at 1% significant level. The prediction that, strategic usage of information technology influences business performance and this was supported with ( $p = 0.000 < 0.001$ ). This confirms that information technology usage strengthens the positive relationship between Entrepreneurial Orientation and Hotel Business.

**Table 3. The measurement model**

Constructs	Items	Loadings	AVE	CR	Cronbach's alpha
Hotel Business (HB)	HOTBUS1	0.918	0.671	0.910	0.906
	HOTBUS 2	0.886			
	HOTBUS 3	0.879			
	HOTBUS 4	0.809			
	HOTBUS 5	0.643			
Information Technology Usage (ITU)	ITUSAGE1	0.886	0.667	0.888	0.885
	ITUSAGE 2	0.806			
	ITUSAGE 3	0.784			
	ITUSAGE 4	0.626			
Entrepreneurial Orientation (EO)	EO 1	0.911	0.620	0.743	0.728
	EO 2	0.901			
	EO 3	0.689			
	EO 4	0.667			

AVE: Average Variance Extracted, CR=Composite Reliability



**Fig. 3. A simple moderation model depicted as a conceptual diagram**

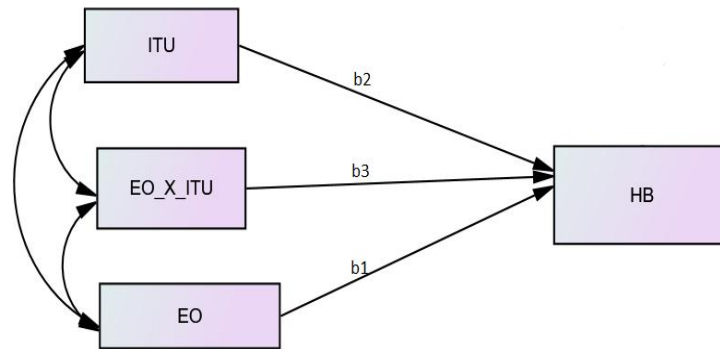


Fig. 4. Statistical model for moderation

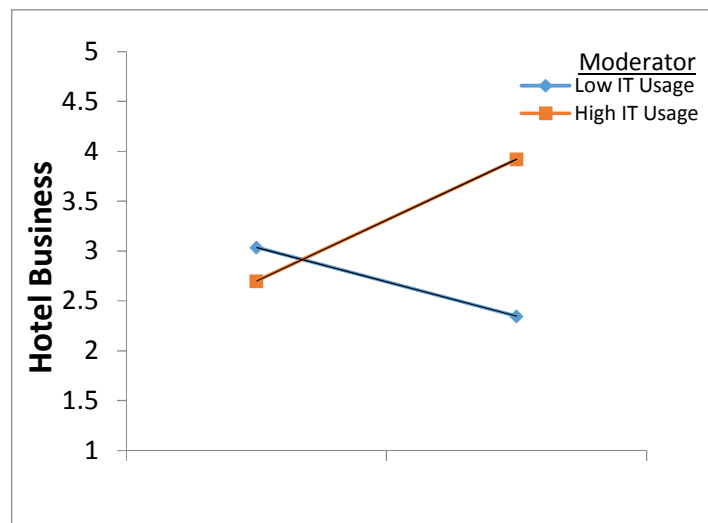


Fig. 5. Moderating effect of information technology

Table 4. Regression weights

			Estimate	S.E.	P-value
HB	←	EO	b1 .299	.008	***
HB	←	ITU	b2 .307	.007	***
HB	←	EO_X_ITU	b3 .544	.010	***

(R<sup>2</sup> = 0.784), \*\*\* p-value at 99%

EO\_X\_ITU = The interactive term of Entrepreneurial orientation and Information technology usage

### 3. RESULTS AND SUGGESTIONS

In this study, emphasis was on the internet usage in small hotel business. The main aim of the study is to determine the aims of internet usage in small hotel businesses in Ghana. The number of the small hotels was taken from GTA records and the entrepreneur/owner/manager was contacted. Although information about the number of computers, computers in use and the number of the staff using the computer ranged between 1 or 2, the emphasis for this study was

on internet usage, hence the detailed discussion on the internet usage.

Regarding owner/managers information technology usage, the result showed; knowledge about IT 0.886, ability to communicate to customers/guests through online 0.806, track reservations 0.784 and ability to search for information online 0.626. This indicates the owner/managers of small hotels in Ghana use the internet for business activities. The study results confirm that IT enhance the hotels'

business performance [1], satisfy customers and increase a competitive advantage for receiving travelers' information [4].

Concerning hotel businesses (HB), the owner/managers were asked to select a business that the hotel uses IT to perform and the findings were as follows. 24/7 online reservation 0.918, Recreational facilities 0.886, Airport/Bus terminal pick up 0.879, Service quality of Bed, Food & Beverage 0.809, Conference rooms/ Business center 0.643. This study is therefore in line with the following assertions, that IT enhances service quality [23,25,27], accommodation booking and assists the dissemination of information across departments of a hotel and between levels of staff [4].

For the entrepreneurial orientation, when owner/managers were asked to indicate the extent they are willing to exhibit entrepreneurial orientation activities in information technology usage in other to promote hotel businesses, the study results showed; Innovation 0.667, Risk-taking 0.689, Competitive aggressiveness 0.901 and Proactiveness 0.911. Thus, owner/manager learn innovative ways of managing hotels and to strategically position itself to take a competitive advantage in an aggressive business manner [5] and improves the skills of the people who make up the service organization [28]. In exhibiting entrepreneurial orientation traits, entrepreneurs take a risk which involves the preparedness of an entrepreneur or a firm undertaking a business venture in an anticipation of a significant return in aggressiveness to launch its product or services in anticipation of capturing the market first [18]. In their proactiveness to capture a bigger share of the market, entrepreneurs use IT in scanning for opportunities and information about rivals. Hotel businesses have been increasing rapidly [4] and the entrepreneurs orientation about IT in positioning itself in a competitive market is also on the rise due to the benefits it brings to the business. The study concludes by enumerating the benefits small hotels stand to gain if it uses IT.

### 3.1 Benefits of IT (Internet and Webpage) Usage in the Small Hotels

Generally, there are many benefits regarding the use of IT for the small hotel businesses and the most important of these are as follows [4,23,29].

- IT usage enhances the way products and services of the hotel is shown to the guest

in multimedia format with a reasonable cost.

- It is the easy means to communicate among hotels and other businesses for effective collaboration (e.g., businesses like banks, getting agency reservations) and ensures easiness for the small hotels that lack IT professionals.
- No business has superiority over IT usage but comparatively, small hotels do not have an obligation like going under bureaucratic procedures before using e.g. internet as in large hotels.
- IT is the cheapest means to advertise hotel products/services, as it is an easy way to reach millions of people surfing on the internet.
- It gives a chance to the small businesses to have effective strategies in a globalizing world, that is, it becomes easier for small hotels to do business with the foreign countries.
- With an active webpage, small hotel businesses have sustainable communication with the guests 24/7.
- IT usage saves a lot of time since the following activities are processed at the same time. (search information about the rival businesses, send messages to many people via e-mail download the required information to their computers, do banking transactions, communicate and track the stock market, track reservations on the internet and to increase service quality).

## 4. CONCLUSIONS

Despite the benefits associated with the use of IT, small hotel businesses must keep the information on their websites up-to-date in order to benefit from these advantages. Additionally, new technological renovations e.g. Java, a new computer language, could be added. Small hotels should not lose sight that lack of technological changes causes the webpages to lose their attractiveness and cause a reduction in the number of visitors. Even though the hotel industry has some similarities in terms of products/services, the use of IT can differentiate the hotels from their competitors. This will enhance its services and enable it to gain a competitive edge over others.

## COMPETING INTERESTS

Authors have declared that no competing interests exist.

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## APPENDIX

### A: Demographics (Please Tick or Complete Where Appropriate)

1. Age:  21-25  26-30  31-35  36-40  41 and above
2. Gender: A. Male  B. Female
3. What is your highest educational level?  
 No Formal Education  Secondary/ High School  
 Professional Certificate/ Training  Higher Diploma /Bachelor  
 Post-Graduate

### B: Availability of Hotels Computers (Please Tick or Complete Where Appropriate)

4. Do you have computer (s) in the hotel? Yes  No
5. If yes, number of computers in the hotel 1  2  3  4  5 and above
6. The computer is connected online. Yes  No
7. Do you have IT professional in the hotel? Yes  No

**C: To what extent do you agree/disagree to the statement ‘internet usage enhances hotel business in the following ways?’**

<b>Hotel Business</b>	<b>Totally Disagree</b>	<b>1</b>	<b>2</b>	<b>Neutral</b>	<b>3</b>	<b>4</b>	<b>Agree</b>	<b>Totally Agree</b>	<b>5</b>
8 Online reservation 24/7									
9 Recreational facilities									
10 Airport/Bus terminal pick up									
11 Service quality of Bed, Food & Beverage									
12 Conference rooms/ Business centre									

**D: Please tick the number that best describes your usage in IT in the following areas (from 1 = unsatisfactory to 5 = exceptional)**

<b>Internet Usage/ Webpage Usage</b>	<b>Totally Disagree</b>	<b>1</b>	<b>2</b>	<b>Neutral</b>	<b>3</b>	<b>4</b>	<b>Agree</b>	<b>Totally Agree</b>	<b>5</b>
13 To advertise hotel product and services									
14 Online communication with customers/guest									
15 To track reservations									
16 Ability to search information online is									

**E: To what extent do you agree/disagree to the statement ‘entrepreneurial orientation activities is enhance by internet usage to promote hotel business in the following ways’**

<b>Entrepreneurial Orientation</b>	<b>Totally Disagree</b>	<b>1</b>	<b>2</b>	<b>Neutral</b>	<b>3</b>	<b>4</b>	<b>Agree</b>	<b>Totally Agree</b>	<b>5</b>
8 Innovation									
9 Risk-taking									
10 Competitive aggressiveness									
11 Proactiveness									

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