**How do hotels operationalize their competitive intelligence efforts into their management processes? Proposing a holistic model**

**Abstract**

The purpose of this study is to examine and develop a holistic competitive intelligence (CI) model that incorporates all CI efforts at the management level within an organization, including strategic, tactical, and operational levels. To achieve this goal, the researchers administered in-depth, semi-structured interviews with middle- level managers and supervisors in an independent, full-service hotel located in Hong Kong. The findings show that many hotel departments do not use formal and centralized CI practices in their daily operations. There is no formalized system for CI process management, which includes data collection, storage, analysis, and dissemination. In addition, there is a disconnection among management levels in coordination of CI practices. The research findings suggest that frontline employees play critical roles in the CI processes and practices. Finally, this study provides theoretical and practical implications, including a formalized guideline for researchers and managers, with limitations and suggestions for potential future studies.

**Keywords:** competitive intelligence; integrated intelligence; middle managers and supervisors; hotel.

## 1. Introduction

One of an organization's concerns regarding survival and success in a turbulent business environment is creating a solid organizational strategy (Menon, 2015; Miltenburg, 2005). Considering the importance of this issue, previous studies have focused on the antecedents and outcomes of selected strategies by developing and using various strategic tools (Vuorinen, Hakala, Kohtamäki, & Uusitalo, 2017). Previous studies also agree that the main input for formulating, implementing, and evaluating such strategies is knowledge. The concern then becomes how to collect, analyze, and process the necessary knowledge (Bolisani & Bratianu, 2018; Sveiby, 2001). Researchers have addressed the ways to access, manage, store, share, and transfer knowledge in order to shape organizational strategy by developing various approaches (Choi, Poon, & Davis, 2008; Dayan, Heisig, & Matos, 2017; Jeong & Yoon, 2017; Marasco, De Martino, Magnotti, & Morvillo, 2018; Zheng, Yang, & McLean, 2010). One of these approaches is competitive intelligence (CI), which refers to the necessary ethical discipline for decision-making based on understanding the competitive environment (Strategy & Competitive Intelligence Professionals, 2014). Previous studies in this area determined that employing CI practices contributes to an organizational strategy via empirical or conceptual studies by focusing primarily on upper-level management efforts (Bose, 2008; Calof, Arcos, & Sewdass, 2017; Calof & Wright, 2008; Nazar & Seidali Route, 2017; Prescott, 1995; Rouach & Santi, 2001; Shujahat et al., 2017; Teo & Choo, 2001; Vedder, Vanecek, Guynes, & Cappel, 1999). In other words, the majority of the previous studies on CI focus primarily on upper-level management activities (Oubrich, Hakmaoui, Bierwolf, & Haddani, 2018).

CI efforts by the middle and lower levels of an organizational, however, can also contribute to organizational strategy by using the strategy-as-practice approach (Jarzabkowski,

2004; Whittington, 1996, 2007). This is because middle managers and/ or supervisors have experience and knowledge in various practices that could contribute to organizational strategies. Using the strategy-as-practice approach by Jarzabkowski (2004) and Whittington, (1996, 2007), we can argue that research studies should incorporate the experience of middle- and junior managers, considering practical knowledge and individual access to information that might not be available to upper level managers. Along with the organizational strategy approach, succeeding in daily operations also requires the involvement of middle- and low-level managers in CI practices (Maritz, R. & Du Toit, A., 2018; Rezaie, Mirabedini, & Abtahi, 2017).

If organizations have formal CI practices, they may have greater benefits (Søilen, 2017). However, if organizations do not have the formalized CI, middle managers and/ or supervisors could follow their own practices, which, in turn, may create confusion and compatibility problems among departments. Additionally, these managers may have problems contributing to the overall organizational strategy due to this lack of a formalized approach. Overall, there are three issues regarding CI in hospitality and tourism research and practice. The first is that CI efforts mostly focus on marketing issues like customer experience and competitors or rivals of companies. However, this focus is limited only to the price and customer aspects. The second issue is that CI practices may be undertaken and followed by senior level management. The third issue is not having a conceptual/business CI model as a guide in collecting different levels of intelligence, which incorporates all levels of management (Abbaspour, Amirkhani, Ezzat, & Hozori, 2018).

Considering these issues, the purpose of this study is to address the knowledge gap concerning the middle management approach to CI practices. In addition, to eliminate confusion and develop a formalized approach, there is a need to incorporate and combine CI practices on

all organizational levels. This study is the first attempt to investigate the CI practices employed by middle managers and/ or supervisors and develop a model that could guide managers and future research. It also recommends guidelines, which hotel properties can employ to involve their middle managers and/ or supervisors in CI activities.

This study has the following sections. First a literature review examines the academic study of CI, as well as CI efforts in hotels. Following this, the research methodology utilized in the study is explained. After the study's findings are presented and discussed, a final section highlights emerging conclusions and develops the conceptual model. Study limitations and suggestions for future research are also provided.

## 2. Literature Review

### 2.1. Competitive Intelligence

Competitive intelligence is defined as "a process or practice that produces and disseminates actionable intelligence by planning, ethically and legally collecting, processing and analyzing information from and about the internal and external or competitive environment in order to help decision-makers in decision-making and to provide a competitive advantage to the enterprise" (Du Toit, 2015, p. 15). Since there is a link between CI and organizational performance (Calof & Wright, 2008; Cappel & Boone, 1995; Groom & David, 2001; Mariadoss, Milewicz, Lee, & Sahaym, 2014; Tej Adidam, Banerjee, & Shukla, 2012), previous studies have addressed the awareness level of CI practices among managers and examined how, why, when, and where managers use CI practices (Bernhardt, 1994; Bose, 2008; Chen, Chau, & Zeng, 2002; Dishman & Calof, 2008; Jaworski, Macinnis, & Kohli, 2002; Li & Hsu, 2018; Nasri, 2011; Rouach & Santi, 2001; Viviers, Saayman, & Muller, 2005; Wright et al., 2002; Wu, Law, & Liu, 2018).

The scope of the CI process is broad since it is directly related to both organizational strategy and strategic decision-making within organizations (Calof et al., 2017). Data about CI activities comes from both external and internal environments such as customers, the market, competitors, and business interactions (Koseoglu, Karayormuk, Parnell, & Menefee, 2011). Processing and analyzing this collected data requires many tools originally developed by other disciplines (Koseoglu, Ross, & Okumus, 2016). Considering the different approaches of these disciplines to the concept of CI, such as business intelligence, market intelligence, competitor intelligence, and environmental scanning, there is confusion regarding definitions (Koseoglu et al., 2016). To eliminate this confusion, Bulger (2016) provided a new term: integrated intelligence. She defined integrated intelligence as this:

> [T]he robust integration of insights from "intelligence pools" that are identified across the business environment and in collaboration with other functional areas and disciplines that are synthesized to gain a comprehensive picture of a market in its current state and in its probable future state. The resulting outcome of integrated intelligence efforts is to provide necessary knowledge for critical decisions and recommendations to drive and gain a competitive advantage for an organization (Bulger, 2016, p. 63)

At the operational level, integrated intelligence has two main intelligence pools. The first is the primary intelligence pool, which integrates the competitor intelligence pool, economic intelligence pool, business intelligence pool, customer intelligence pool, and competitive technical intelligence pool. The second pool includes the adjacent intelligence pool, which supports the primary intelligence pool; for example, the market intelligence pool supports the competitor intelligence pool (Bulger, 2016).

**2.2. Competitive Intelligence in Hotels**

With the advent of newer technologies and easier access to information, the hotel industry has become more competitive. Given the rise of shared economies such as Airbnb, more informed guests, and higher variation in the increased demand, the hotel industry must observe, understand, and formulate dynamic strategies. Consequently, competitive intelligence is a necessity for any hotel. Hotel managers, however, do not reflect this need in their practices. For example, many upper-level hotel managers do not know anything about competitive intelligence and its practices (Koseoglu et al., 2016). Some studies have indicated that CI and environmental scanning applications in the hospitality and tourism industry are not moving beyond the tactical level (Baum & Lant, 2003; Bergen & Peteraf, 2002; Brotherton & Leslie, 1991; Brownell, 1994; Costa, 1995; Costa, Teare, Vaughan, & Edwards, 1997; Costa & Teare, 1994; He, Zha, & Li, 2013; Jogaratnam & Law, 2003; Korte, Ariyachandra, & Frolick, 2013; Li & Netessine, 2012; Mohammed, Guillet, & Law, 2014; Nieves & Diaz-Meneses, 2018; Okumus, 2004). In other words, hotel managers are employing only a part of competitor intelligence and ignoring the other aspects of CI (i.e., competitor intelligence pool, economic intelligence pool, business intelligence pool, customer intelligence pool, and competitive technical intelligence pool). Only monitoring competitors, however, is not enough to gain a long-term competitive advantage since the stakeholders (customers, government, nonprofit organizations, etc.) of hotels might create opportunities for reshaping strategies or create pressure towards these competitor-based strategies.

To the best of our best knowledge, only one study in the hospitality field (Koseoglu et al., 2016) focused on CI practices at the strategic level in hotels. That study addressed the awareness level among hotel managers regarding CI practices. The study asked how, why, when, and where hotel managers from hotels located in Minot, ND, USA used CI. The findings of the study

indicated that general managers' awareness was low, and they did not use CI practices systematically. Hotels had issues regarding the operationalization of CI practices since these practices were not managed at the departmental level. Additionally, Koseoglu et al (2016) failed to provide clear evidence on how to operationalize CI in hotels. Therefore, the examination of CI practices of middle- and low-level managers can provide a better overall understanding of CI practices from the operational level to the strategic level.

**3. Methodology**

**3.1. Research Setting**

For this study, middle managers and/ or supervisors from an independent, full-service hotel (called Hotel A in the rest of the study) located in Hong Kong were selected by employing a purposive sampling approach (Jennings et al., 2003). The Hong Kong setting was also ideal for this study since Hong Kong hotels are ranked among the best in the world for providing high-level service to hotel customers. A semi-structured questionnaire containing two sections was developed (see Appendix). The first section had 19 statements/questions. Sixteen questions were borrowed and adapted from Koseoglu et al. (2016), and three additional questions were developed to investigate how managers operationalize CI activities and what they recommend to better involve frontline hotel employees in CI practices:

- *Tell us if there is a CI process in your hotel from collecting information to storage and processing?*
- *Have you gotten any help from frontline employees to gather information for CI activities?*
  *If yes, how did they help you?*
  *If no, how may they help you?*
- *To involve frontline employees in CI activities related to your department, what do you recommend they should do?*

The second part of the questionnaire measured managers' demographic characteristics, such as age, gender, education, years of experience, and the number of employees in their departments.

**3.2. Data Collection**

The interviews were conducted in either English or Cantonese, depending on the language the interviewees felt confident speaking and were conducted by a research assistant able to speak and translate both English and Cantonese and who is trained in both managing in-depth interviews and in CI. The interviews were recorded and transcribed in English. Since the ideal sample size in a qualitative study is between 15 and 40 people (Koseoglu et al., 2016), appointments to conduct in-depth interviews were arranged with 22 middle managers from the hotel. The interviewers were selected by The Hotel's Human Resource Department by considering criteria provided by researchers. The criteria included an interview with at least one employee from each department who has been in a manager or supervisor position. The first interview was conducted on September 28, 2017, and the final interview was conducted on November 16, 2017. Interviews usually lasted between 30 and 45 minutes. First, after completing 19 interviews, the researchers felt that the respondents were providing similar and consistent comments. It was felt that data saturation was reached (Koseoglu et al. 2016). However, three additional interviews were also conducted to confirm the saturation. After conducting 22 interviews, the authors determined that data saturation was reached since the interviewees responded to the questions in similar ways for CI issues, including monitoring competitors, awareness of CI and CI practices, training in CI, implementation of CI practices, the reason for CI, and the effectiveness of CI. Table 1 presents the profiles of the respondents.

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Insert Table 1 about here

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## 3.3. Analysis

Following the interviews, recorded tapes were transcribed by a bilingual researcher trained in the process. To identify common themes and patterns, the data was analyzed. Two authors of the paper with previous experience conducting in-depth interviews coded the interviewer's notes according to the purpose of the research. When there was a disagreement between the two authors about the coding, the third author was invited to finalize the coding scheme. Both theoretically-driven and inductively-orientated data analysis approaches (Miles, Huberman, & Saldana, 2013) were utilized in this study because the blended approaches allowed the authors to "be flexible in identifying elements or concepts related to CI from the data that were not identified in previous studies" (Koseoglu et al., 2016, p. 166). Following the theoretically driven approach, when coding the data, CI typology developed by Wright et al. (2002) and some CI themes from Koseoglu et al. (2016) and Koseoglu et al. (2011) were considered, including monitoring competitors, awareness of CI and CI practices, training in CI, implementation of CI practices (formal vs. informal, centralized vs. decentralized, sources to collect the data related to CI), the reason for CI, the effectiveness of CI related to the organization's performance and decision-making process, and the involvement of frontline employees.

## 4. Findings and Discussion

## 4.1. Monitoring Competitors

All interviews began with the question, "How do you monitor your competitors?" In broad terms, managers from different departments should know what their competitors are doing to gain competitive advantage. All respondents indicated that they primarily monitor their

competitors via social media. Managers from several departments monitor nearby hotels. Surprisingly, one of the respondents from the call center department did not consider monitoring competitors and pointed out the following:

> No, we don't monitor our competitors, but other hotels always call us for information. As managers, we have been in this field for many years and know recognize many hotel managers. Sometimes, they will call me and exchange information.

Identifying a hotel's competitors may be confusing if the hotel contains several different amenities such as restaurants, spas, etc. A manager from the food and beverage (F&B) department indicated that:

> The competitors of Hotel A are very clear. If I treated Brand A (inside in the hotel) as an individual to compare with others, its competitors are not clear because Brand A is in between a hotel and a restaurant. It provides all-day dining, including breakfast, set lunch, set dinner, and high tea. We have brunch on Saturdays and Sundays. It is difficult to find a restaurant in hotels nearby with similar settings. If you compare only happy hours, high tea, à la carte, or set menus, we have many competitors. We have difficulty defining who our competitors are.

Based on the follow-up question (FQ) "If we do not use the word 'competitor,' do you monitor those restaurants providing similar services or monitor the same industry?", the manager pointed out:

> We seldom do this. Occasionally, we may get their information through the Internet, social media such as Facebook, or email. If we see their information, such as a promotion, we look at it. We do not actively search for what is done by other restaurants.

Several departments, including revenue and reservations, security, and technology and innovation, emphasized information sharing rather than monitoring competitors. For example, the security department indicated that:

We have a Security Committee in the Hong Kong Hotels Association (HKHA). Besides, there are more than ten hotels in Tsim Sha Tsui (TST). We also have a network to communicate with these hotels. We have a WhatsApp group for the hotels in TST. We also have a connection with the West Kowloon Police Station. We share information among the Security Managers. Our CCTV cameras cannot clearly see the plate numbers of vehicles. When there is an accident, it cannot help. A few years ago, I went to one of the hotels in TST to see their CCTV camera. Their camera can clearly see the vehicle plate number and the faces of people. We proposed this to management, and we changed to high-definition camera 2–3 years ago.

The technology and innovation department also shares information with its competitors, as noted in the following statement:

When we enhance or upgrade a system, we will ask the IT of other hotels if they have used it before. In Hotel A, we are always the first to try a new system. For example, the Opera reservation system is a common system, but different hotels use different versions of it. We will ask other hotels when we need to upgrade the system. (FQ: It is not to follow/monitor your competitors, just share information?) We just help each other.

Employees' responsibility for monitoring competitors is not clear. One of the managers from revenue and reservations pointed out, "As part of our duties, we check our competitors' daily online pricing and also check the pricing for the next 120 days. We also check the competitor's history, such as their occupancy and average rate the day before." However, one of the managers from front office indicated, "We don't have a task to follow/monitor our competitors. When we go to other hotels during our days off, we observe what is different in their services and what they are doing well."

The tools used in CI play critical roles for data collection. According to the respondents, social media is frequently used. One manager from the marketing department more specifically emphasized the tools used in the department, saying:

We use tools to keep an eye on what competitors have been mentioned in public

forums like Facebook, and Instagram. Besides using these tools, we also have some

student interns who assist us by doing some manual research because we have to know

what our competitors are doing and what they are going to do. We also regularly

organize events or chit-chat with some of the other hoteliers to share what we are going

to do.

## 4.2. Awareness of Competitive Intelligence

Previous studies showed that awareness about competitive intelligence in organizations,

particularly in hotels (Koseoglu et al., 2016) is low. The findings of this study confirmed the

previous studies' findings. Most of the respondents indicated that they had not heard of CI. A

few respondents indicated they had heard or knew the term. When being asked about their

experience with the term, their answers were competitor-focused CI practices rather than

integrated intelligence practices. None of the respondents had any formal training in CI practices.

## 4.3. Implementation of CI Practices

Before investigating the implementation of CI practices at the different operational levels

of the hotel, the interviewer explained this study's definition of CI to the managers. Next, the

interviewer asked, "How do you implement these practices in your departments?" Most

respondents indicated that they use Internet sources to collect data related to their operations.

Some of the more detailed responses, however, indicate a few other interesting applications

related to the data collection process. For example, a manager from the banquet department said:

We have an agent collecting information such as salary. We do this job by ourselves, in

our group only, in our department only. No boss, no other departments told me, "You

should do that. You have to do that." We need to do this, and we do it initially by

ourselves.

One of the F&B managers explained how the observation method works in the hotel,

saying:

> It is not formal; it is done in the leisure time of our staff. When our staff go out for
> dinner, have a drink, or travel abroad, they may see different food and drinks. They
> bring this information back to the department. If we want to have a promotion on a
> special item and we know that a restaurant is famous for it, we have a formal way to try
> their meals. We have a budget; we can use this budget to go to the restaurant for
> lunch/dinner (observing visit). We mainly apply this to the pre-opening of a restaurant.

Another F&B manager raised a different perspective, discussing CI practices related to the effectiveness of attending meetings to gain information about social responsibility within F&B. The manager said:

> We attend the Committee meeting held in HKHA to learn more about other hotels'
> activities; this is one of the CI activities. We need to know more now, like how
> environmental issues may be related to hygiene. We are starting to handle food waste.
> This is a corporate social responsibility. We can learn what is welcome and what is not
> welcome by customers. We can make decisions about ordering amounts to reduce
> wastage. In the Committee meeting, we discuss new information and social networking.
> We do not disclose hotel secrets. We share hardware upgrades and case studies.

One of the front office managers emphasized how customers play a role in the CI process, although the manager pointed out they do not implement CI practices:

> No, we don't have CI practices; we focus on operations. (FQ: You do not actively ask CI
> information?) No, we do not. As a professional, we just ask, "How was the stay?" Some
> customers tell us about the facilities that they enjoy in our hotel that are not provided in
> other hotels. We have some ex-colleagues now working in different hotels. We share
> our experiences. We share some good points with our supervisor. We have an informal
> way of sharing. We don't have a formal way to find the market trend.

## 4.4. Formalization of CI Practices

Koseoglu et al. (2016) indicated that hotel managers implement routine CI practices as a

mix of formal and informal procedures. According to the present study's findings, respondents indicated that they must implement CI practices as centralized, formal procedures based on operations related to the functions of upper-level managers. Additionally, they engage in informal practices to collect data. For example, a manager from the front office indicated that:

> Our staff talks to customers to learn more about them; it is not formal, and the main purpose of talking is not to gather information, just a friendly conversation.

The human capital department emphasized how personnel networks are important to CI practices, saying:

> All our staff rely on their personal network to collect some information on training in a non-formal way. This is not a formal task.

The marketing managers indicated some confusion about the responsibility for CI practices, stating:

> It is hard to say who holds the responsibilities; we are actually on the same team. All of us have the responsibility. The one who mainly gets the raw data for us is a student intern because we are all busy with our daily tasks. We assign a student intern to do the research, and then we take care of the analysis part, we take care of the rest of the parts. (FQ: Are the interns regular staff working every day?) They work Monday to Friday for three months. (FQ: You mentioned that you use some tools to monitor your competitors, is this task done by one staff member or more than one?) The system does it. When we want to know about a specific promotion, we can enter some keywords. The system automatically generates the figures on the desktop.

## 4.4. Reasons for CI Practices

This study looked at the reasons for implementing CI practices. As indicated in Tej Adidam et al.(2012), the respondents used CI practices to find better ways to serve customers, enhance their position in the market, and take advantage of their competitors in daily operations. For example, a manager from the sales department emphasized that:

When we find that an organization holds an event in another hotel instead of Hotel A,

we check if it is our recent client or if we have a contact person. If yes, we contact the

organization to see why they did not choose us. We want to know the reasons so that

we can improve our services and facilities.

A manager from the revenue and reservations department explained how they used the CI

practices to plan future operations:

I want to know the market, to know what is happening outside. To have better inventory

control and planning. For example, if we know that there will be a Taiwan holiday next

month, we will review which packages, promotions, or rooms Taiwanese customers

like. We will adjust these packages during the Taiwanese holiday, such as by increasing

the prices and adding more benefits and products on the package to attract more

customers. These are essential for a hotel.

## 4.5. Influence of CI Practices on Organizational Performance and Decision-Making

Most of the respondents stated that CI is helpful in decision-making and helping hotels

perform better. Additionally, we investigated whether employees were trained for CI activities.

The majority of them indicated they had no CI training in their departments.

## 4.6. Managing CI Processes

CI processes include four steps: collecting data, storing and processing information,

analyzing and reporting, and dissemination (Brummer, Badenhorst, & Neuland, 2006). We

investigated how these steps were managed regarding their CI practices. The findings of the

study indicated that the management of these steps depends on whether the CI practices are

implemented as formal or informal activities. If the activities are informal, the respondents did

not consider any of the steps. For example, a manager from the banquets department stated that:

Keep it in the cell phone. No process. Just collect; no official analysis.

While one of the call center managers said:

I save them in my email. If I receive a .pdf file, I save it on my desktop. I review them

by myself. If I find some useful information, I share it with our IT department.

The revenue and reservations manager said:

Not formal, no black and white. If I get some information, I share it with my supervisor

verbally.

The managers who implement formal CI practices follow some of the CI process steps.

For example, an F&B manager stated:

After observing a visit, we need to submit a report. The report includes the date, time,

participating staff, and some photos. Photos are the most important. For example, you

can take photos of the menu, so there's no need to have a physical copy. Also, photos

for food presentation. Before visiting the restaurant, we may collect some information

on the promotion. We also attach the related information in the report. The report will be

submitted to the F&B Director. If necessary, the F&B Director will hold a meeting to

discuss further action. (FQ: Is there a centralized location to store this information?) We

submit to Admin; Admin keeps the reports.

The marketing manager said:

We highlight special issues and share them with concerned parties by emails. These are

stored in the email system and will not be stored in a centralized place. Hotel A news is

stored on the server, but competitors' news will not be since the news changes very

rapidly.

## 4.7. Role of Frontline Employees on CI Practices

Frontline employees in a hotel always engage with customers directly. They are also

connected with many departments in the hotel. Therefore, it is logical for frontline employees to

help managers to collect data from customers. The interviewer asked the respondents if they

have received any help from frontline employees to collect data related to CI practices.

Respondents from sales, security, technology and innovation, revenue and reservations, human

capital, F&B, and the call center indicated they had not received any collected data from the frontline employees. Other respondents had experiences in this process with frontline employees and gave some examples (Table 2). The interviewer also asked the managers for recommendations regarding how to involve frontline employees more in department-related CI practices. These recommendations are summarized in Table 3. As a result, it is evident that frontline employees can play critical roles in the operationalization of CI practices.

**Insert tables 2 and 3 about here**

## 5. Conclusions and Limitations

The present study identified CI practices employed by middle managers and/ or supervisors and discussed how hotel managers might operationalize these practices. Data was collected via in-depth, semi-structured interviews with middle- and low-level managers who contribute to the strategies regarding the operational practices of a full-service, independent hotel. As one of the first studies in CI, this study serves as an extension of Koseoglu et al. (2016) and enhances the body of knowledge by offering the valuable and useful implications presented below. While Koseoglu et al. (2016) focused on how hotels managed CI practices at the general-manager level, this study shows how individual departments of hotels, or the middle managers involved in those departments, manage CI practices both formally and informally.

Our study indicates that the CI practices in the full-service hotel studied are related mainly to customer experience and their competitors, which limits and lowers the value of CI practices. The other practices of CI such as integrated intelligence for economic intelligence, market intelligence, competitive technical intelligence, and business intelligence are not common at the operational level. The findings show that the intelligence coordination among departments is very weak to support strategic and tactical intelligence from operational intelligence. On one

hand, managers expect intelligence from their own employees and of those of other departments; however, our findings show that there is no collaboration nor guidelines on what or how to collect intelligence among employees. This disjointed and uncooperative environment creates a waste of valuable intelligence and influences the effectiveness of the formulation and implementation of CI practices. Hence, the hotel needs to build a strong link between strategic, tactical, and operational intelligence practices to increase a collaboration culture by focusing on individual intelligence practices, which are each employees' intelligence practices done (un)consciously. This gap helps us develop a comprehensive competitive intelligence model for an organization to operationalize all practices at any level of the organization.

We need to understand the voiced and unvoiced strategy (upper-level management management), tactics (middle-level management), and operations (supervisors) on the organizational levels before introducing the model. In practice, companies should publicize their strategies for customers and investors, who need to know what companies do to be successful. Additionally, companies should share some part of strategies with all levels to enhance both job comprehension and organizational commitment (Parnell, 2003). Hence, some researchers stress that "everyone associated with a company should completely understand the strategy if they are to effectively implement it" (Parnell, 2003, p. 19). From the CI perspective, if companies want to involve all employees into CI practices, the company bosses or CEOs must show the emplyees what the company strategies are and how the employees can use them to better the company. However, this generates a very serious risk for companies since companies are monitored by their rivals. In this respect, other researchers point out that "as much of strategy as possible should be concealed, as the best strategies are those understood only by the strategy maker" (Parnell, 2003, p. 19). Therefore, companies should specify some CI practices with some special

CI agents for unvoiced strategies, tactics, or operations.

The proposed model includes five units (Figure 1). The first unit shows different organizational levels including voiced and unvoiced components, which guides the authors in creating what is needed for our CI pools. The second unit in our model indicates CI pools where all the collected intelligence is transferred. The intelligence collected in these pools is analyzed to feed our organization as needed. There are the three main components which need to be considered for unit 2. First is identification of CI pools such as economic intelligence, market intelligence, competitor intelligence, competitive technical intelligence, business intelligence, and customer insights or customer intelligence. In some cases, overlaps may occur between pools. Hence, the second issue is the link among the pools should be mapped by considering three organizational levels (strategic, tactical, and operational). Strategic CI focuses on a firm's strategies and long term goals. While tactical CI focuses on competitors and customers, operational CI focuses on all the daily activities of firms. The third unit is separating specific intelligence needs for organization and general intelligence collection. In the specific intelligence approach, predetermined and focused needs of an organization are considered. In general, however, everything else is considered in CI pools. The fourth unit is related to how employees can contribute to CI practices. Since firms have unvoiced business models, not all employees can contribute to a firm's CI practices. Considering the confidential nature of the unvoiced components of the business model, firms should select suitable trustworthy employees. However, for voiced components of a business model, the firm should consider all employees in CI practices. After the selection of employees is made depending on voiced or unvoiced approaches, selected CI agents should receive specified training for each group. The last unit to consider in this model is CI action as collection of the intelligence. All individually collected CI needs to be

combined in a pool depending on the specifics of CI.  In this model, managers should build techniques or methods to transfer CI from individual intelligence to CI pools, which could be disseminated and analyzed to feed the business model of the organization.

<div align="center">**Insert Figure 1 about here**</div>

## 5.1. Theoretical Implications

This current study contributes to the body of knowledge in four specific areas. First, strategy-as-practice means that daily practices in an organization contribute to the overall strategy of the organization (Jarzabkowski, 2004). The findings of this study indicate that CI data collected, both formally and informally by middle- and low-level managers during daily operations, can help hotels execute their strategies successfully. Additionally, frontline employees who engage with customers may play a critical role in collecting CI data. This can help hotels increase customer satisfaction, improve their revisit intention, and decrease advertisement cost by word of mouth.

Second, in the literature, there are two ways to formulate a strategy based on the involvement of employees. The first is top-down, and the second is bottom-up (Kim, Sting, & Loch, 2014). The findings of this study illustrate that employee efforts regarding CI practices may help organizations create valuable knowledge relevant to formulating and implementing strategies. Thus, hotels should enrich CI practices by involving all departments and management levels. Third, Koseoglu et al. (2016) emphasized use of CI practices strategically. According to this study, the different hotel departments can consider CI practices at the operation level, but they are not aware how the information they collect can strategically contribute to the overall strategy of the organization. Motivations related to CI practices help organizations establish systemized, tactical-level CI practices in daily operations, promoting CI practices from the

tactical/operational level to the strategic level to accomplish long-term goals.

Finally, Koseoglu et al. (2016) proposed a competitive intelligence framework for small companies, emphasizing sharing the mission and vision of the company, increasing awareness related to CI, encouraging knowledge sharing, disseminating data or information, and integrating CI with employees' responsibilities and duties. This study confirms the importance for this framework in full-service, independent hotels. However, the comprehensive CI model proposed in this study provide more insights to operationalize CI practice in the firm since it considers both (un)voiced business model components and specified CI agents and CI training.

## 5.2. Practical Implications

There are two practical implications at both the strategic and operational levels. First, strategically, incorporating the knowledge of middle management into an organization's overall strategy will improve and enhance the strategy. Second, at the operational level, understanding the mindset of middle managers and/ or supervisors and creating formalized CI might contribute to and improve their day-to-day operations and organizational performance. Additionally, the findings of this study offer a guideline for operationalizing CI practices in small- to medium-sized hotel companies:

1. Identify the required data related to CI coverage for each department.
2. Develop codes of ethics regarding CI practices.
3. Assign each department manager as the CI manager, in charge of managing both formal and informal CI practices.
4. Put the responsibilities regarding CI practices into the contract of each employee.
5. Train existing and newly hired employees on CI practices and continue this training periodically by paying attention to what frontline employees are saying.
6. Develop a system for managing informal CI process steps, including collecting, storing, analyzing, and disseminating data or information by adapting information technology.

7. Develop a reward system to motivate and encourage employees to implement CI practices.

These guidelines may help managers operationalize CI practices at both the strategic and operational levels by increasing employee awareness. These guidelines may align the informal and formal CI practices within the organization, including intelligence pools (Bulger, 2016). These guidelines may help all companies develop a framework for CI practices within their organizations.

## 5.3. Limitations and Future Studies

This study has several limitations. Data was collected from a single hotel located in Hong Kong. Future studies can broaden their focus by including multiple properties in different regions of the world to gain a more comprehensive understanding of employed CI practices. Future studies should focus on understanding how different properties choose their CI practices and how the selected CI practices influence the decisions and performance of those properties. More specifically, it may help researchers to categorize CI practices from the perspective of departmental variation, from the tactical to the strategic level, looking at the benefits and drawbacks of varying methods, as well as the return on the organization's investment. Using more advanced statistical analysis could improve understanding of these practices and their effect on property performance. In addition, while the researchers explained what integrated intelligence is, we did not elaborate on each component. Future studies should focus on components of integrated intelligence and, simultaneously, applicability of them in the organizations.

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**Table 1. Profile of Respondents**

| Code | Department | Managerial experience (year) | Experience in the present organization (year) | Position in the organization | Gender | Age | Formal education | Tourism or hospitality management education |
|---|---|---|---|---|---|---|---|---|
| A | Banquets | 3 | 6 | Middle-level management | Male | 33 | Undergraduate | No |
| B | Call Center | 8 | 7 | Middle-level management | Female | 48 | High school | Yes |
| C | Call Center | 5 | 6 | Supervisor-level management | Female | 37 | High school | Yes |
| D | F&B | 2 | 6 | Middle-level management | Male | 31 | High school | Yes |
| E | F&B | 3 | 6 | Supervisor-level management | Male | 28 | Master | Yes |
| F | F&B Admin | 6 | 6 | Middle-level management | Male | 44 | High school | No |
| G | Finance & Admin | 35 | 6 | Middle-level management | Male | 56 | Less than high school | No |
| H | Finance & Admin | 5 | 1 | Supervisor-level management | Male | 35 | Master | No |
| I | Front Office | 3 | 7 | Middle-level management | Male | 32 | Undergraduate | Yes |
| J | Front Office | 10 | 4 | Middle-level management | Male | 37 | Undergraduate | No |
| K | Housekeeping | 17 | 7 | Middle-level management | Male | 56 | High school | Yes |
| L | Human Capital | 3 | 5 | Supervisor-level management | Female | 32 | Master | Yes |
| M | Human Capital | 1 | 2 | Supervisor-level management | Male | 26 | Undergraduate | No |
| N | Marketing | 2 | 5 | Middle-level management | Female | 31 | Undergraduate | No |
| O | Marketing | 3 | 1 | Supervisor-level management | Male | 30 | Undergraduate | No |
| P | Procurement | 10 | 6 | Middle-level management | Male | 53 | High school | No |
| Q | Revenue & Reservations | 5 | 4 | Middle-level management | Female | 34 | Undergraduate | Yes |
| R | Revenue & Reservations | 3 | 5 | Supervisor-level management | Male | 32 | High school | Yes |
| S | Sales | 4 | 4 | Supervisor-level management | Male | 33 | Undergraduate | Yes |
| T | Sales | 5 | 1 | Supervisor-level management | Female | 32 | Undergraduate | Yes |
| U | Security | 10 | 6 | Middle-level management | Male | 47 | Less than high school | No |
| V | Technology Innovation | 4 | 1 | Middle-level management | Male | 36 | Undergraduate | No |

**Table 2. Examples for the Involvement of Frontline Employees in CI Practices**

| Code | Department | Examples |
|------|-----------|----------|
| E | F&B | One staff worked as in-room dining in another hotel. There was a flower and comment card on every service tray of food. He shared this experience and we adopted half of it. We have comment cards now for customers to make comments. We learn new practices from others. |
| F | F&B Admin | The information of other hotels' or restaurants' food products. He told me the prices and the food provided and attached the type of customers. I am interested in the price and the presentation method of the food. |
| G | Finance & Admin | One staff shared with me a special credit card. This was not a physical card; it was installed on a mobile phone. … The customer showed us this; our staff took a photo and sent it to me. Then I asked my banker for more information. |
| H | Finance & Admin | I received a request to increase the casual wage for a specified period because A, B, C, D hotels are using this wage. He can't find casual with a lower wage. Without this information, I cannot approve the increase of casual wage. |
| J | Front Office | A daughter travelled with her mother. The mother was around 80 years old and lived in Hong Kong when she was young. She moved to Singapore. Recently, her husband died, and she wanted to visit Hong Kong. … A frontline employee talked to her and learned that she likes Chinese drama. She and her husband met at Ko Shan Theatre. We bought tickets for her to enjoy Chinese drama in Ko Shan Theatre. She has been unhappy for a month and seldom talks since her husband left. After she enjoyed the Chinese drama, she was very happy and talked about many old things about her and her husband. The whole family was very appreciative. … The frontline staff shared the background of this old woman, otherwise, we would not have taken this action. |
| K | Housekeeping | The bellboy sent luggage to guestroom and found the guest looking for an adaptor. He told me this. As an adaptor is not expensive, we placed an adaptor in each guestroom to facilitate guests from different countries. The guest uses it; it can help the guest. Some guests requested yoga; we placed a yoga mat in suites where there is enough place to exercise yoga. |
| M | Human Capital | Recently, I wanted to create training material for a specific topic. One staff was trained in this topic in the previous hotel he worked at and he kept the training materials. He passed the material to me and it helped me create my training material. |
| O | Marketing | I work closely with the Guest Relations (GR) Department because it has close relationships with the guests. As I am responsible for advertising, I have to know how our customers/guests heard about Hotel A. Since I work closely with GR, I ask them, "Hey, can you ask the guests of a specific nationality?" Recently I asked the GR team to find out more about guests from East … to know where they heard about us, what kind of travel websites they usually browse. It affects how we place our advertisement. |
| Q | Revenue & Reservations | They should share customer feedback with me. Something like, this repeat guest, he asked for an offer, as he experienced the offer in another hotel. More comments are received on payment. When will our hotel implement mobile payment? Or how can it be more secure for credit card information on online payment? Business partners want to share the payment and split the receipt. They will have feedback on these technologies aspects. (IR: These frontline staff are not in your department; how do they know that this information is related to you and shared with you?) We have daily contact with the Front Office and Guest Relations. As we do the reservations, then they serve the customers, we have a close relationship. |

**Table 3. Recommendations for the Involvement of Frontline Employees in CI Practices**

| Code | Department | Recommendation |
|---|---|---|
| C | Call Center | When checking in, if the frontline staff finds that the customer is very demanding, or if he/she has any preferences, they send an email to us. |
| D | F&B | When employees see any interesting or new things in their travels, they can take a photo with a simple explanation. If there is a platform to share this information, it can be helpful. |
| F | F&B Admin | To share their experience in dining, they can share with me the hardware, presentation method, service sequences, and services style. All these things can be changed; they will not be the same in one year's time. I want to know what our competitors are doing. If we are outdated? Maybe a presentation method can avoid wastage of food. I am looking for this. I can adopt this kind of concept in our hotel. |
| H | Finance & Admin | I think it depends on the person if he/she takes CI activities as an important thing or not. Imagine we have a system that can provide you with CI information. If a manager does not care about CI and just does his job, he neglects the system. It is useless. We need to train the managers with the mindset that we need to know what is happening in the market to get the job done. Even though there is no such system, he/she can find a way to get the information. I think the software (mindset) is more important than the hardware. |
| I | Front Office | Since the opening of the hotel, every frontline employer needs to submit guest preferences. Every staff needs to submit 20 guest preferences every month. This practice includes the frontline staff of F&B, housekeeping, the front office, and concierge. From these guest preferences, we know the types of customers and what customers want. (FQ: Guest preferences can be everything that the customer has said? For example, "The room is beautiful."?) Yes. (FQ: Do you think the CI information provided by frontline staff is enough? How can you involve frontline employees in more CI activities?) I think in their part, that is OK and acceptable. (FQ: That is, no need for them to do more to get more information?) They can provide more, but this is based on the personality of the employee. If the employee and the customer both feel comfortable to talk, they will have conversations. We don't want customers have a feeling that we are asking for information from them; we want natural conversations, just like talking with a friend. |
| J | Front Office | I think it depends on the staff. The staff in Hotel A are more passionate, energetic, and do by heart. Therefore, they actively talk to customers in a casual way and can collect information on customers. I think they have provided a lot of CI information for us. (FQ: What do you think of the sharing channel? If this involves all frontline employees in the hotel, they may not know what information is related to you.) In operations, we are busy and sometimes may not have time for lunch. If our staff have time, after check-in they will update the customer's preferences in the customer profile. Mainly Guest Relations staff do this. We have this practice now. Guest Services staff, they don't have time to do that. If time is available, we hope for further updates to the customer's profile. |
| K | Housekeeping | They collect guests' information for me now. Recently, on a rainy day, a guest commented why there was no umbrella in the guestroom. Actually, he/she can borrow one at the lobby. Sometimes, guests are not active. We placed an umbrella in each guestroom since last month. It is autumn now; the umbrella is maintained in-suite only. We encourage frontline staff to report to us any issues related to guests in the briefing sessions. |
| L | Human Capital | If they know any special issues about other hotels, such as trends, they can share them with me. |
| M | Human Capital | If they can provide the training materials they were provided in other hotels that would be great. |
| N | Marketing | It would be great if every staff actively paid attention to the news. All the news can be sent to one staff, and this staff should be familiar with the operation of the whole hotel. This staff centralizes, scans, filters, and categorizes the news. Then they send the news to the concerned managers. |

| | | |
|---|---|---|
| O | Marketing | I think they can talk to the guests and know more about how they heard about Hotel A. In my role, I need to know where I should place advertisements. Maybe they come from Booking.com, maybe they come from Expedia, maybe they come from… I have to know because there may be some changes we have not discovered. (FQ: You want frontline employees to have more conversations with guests?). Yes, so we know more about their travel habits and how long they take for travel research, from when they start planning until they confirm the booking. We want to know the timeframe. |
| R | Revenue & Reservations | It would be great if they can help me to find out all the hotels in Hong Kong: what they are selling, what their promotions are, and what their special items are. And regularly update me with this information. |
| T | Sales | Share more about their experiences gained from their private dinners/trips to other hotels. |
| U | Security | Frontline employees may not know what information is related to security. When they see some special or related information, they can pass it to their supervisors. Supervisors can send emails to me. |
| V | Technology Innovation | Take a photo of the product/system. When you go overseas, you see a new product. You can take a photo and ask the local people the function of the product. With this information, we can search for more information to see if this product is suitable for us. We can try this if there is a new product no one has tried in Hong Kong. |
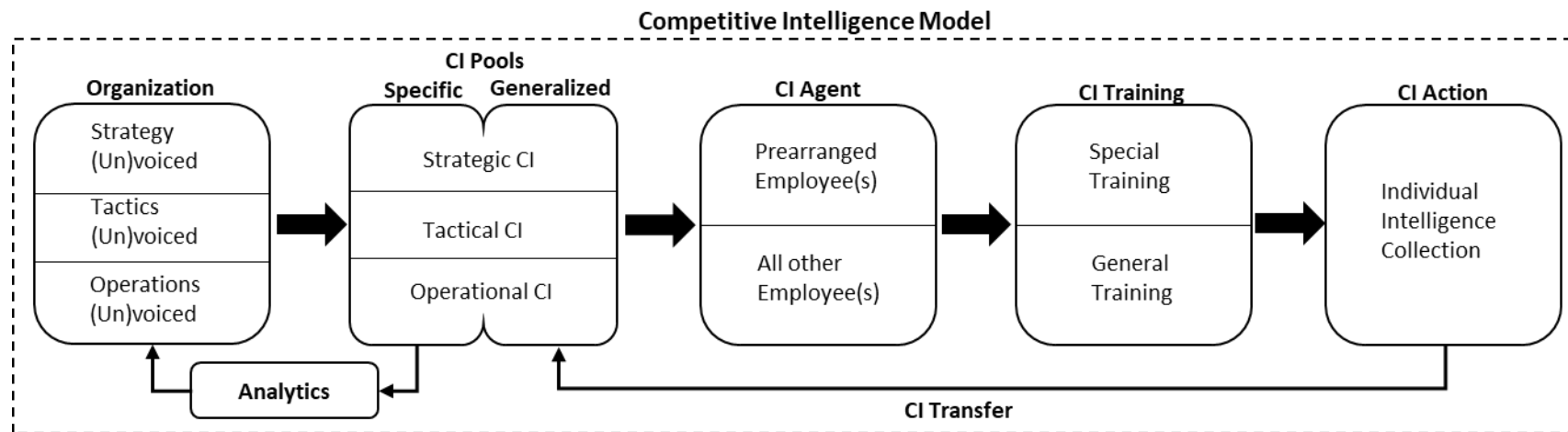
**Figure 1. Proposed Comprehensive Competitive Intelligence Model**

**Appendix**
Questions for Competitive Intelligence Practices in a Hotel

- What is your duty/role in the hotel?
- How do you follow/monitor your competitors?
- Have you heard anything about Competitive Intelligence?
- What is your experience with it?
- Have you had any training on Competitive Intelligence?
- If No #2, we identify what CI is. And then should ask
  'How do you implement CI practices in your department? Tell us about your CI activities. What information do you look for?
- Why do you apply CI activities (competitors, customers, markets, employees, products, benchmarking)?
- If yes #2, tell us about your CI processes/activities (formal v. informal, centralized v. decentralized, etc.).
- Who-primarily does CI in your department? (Is CI information gathering a formal part of somebody's job responsibilities? If so, who?)
- How is your CI process working?
- Tell us if there is a CI process in your hotel from collecting information to storage and processing?
- How does CI influence your decision-making process? (Does it help you make quicker decisions? More correct decisions?)
- What do you think about the effectiveness of CI activities in your hotel? (Does CI help your hotel perform better?)
- Please give us some specific examples of how the information you gather helps your hotel improve its performance?
- What kind of sources do you use? Internet, journals, mystery customer, mystery employee, company employee, suppliers, industry experts?
- How do you train your staff for CI activities?
- Have you gotten any help from frontline employees to gather information for CI activities?
  If yes, how did they help you?
  If no, how may they help you?
- What do you recommend to be involved frontline employers in CI activities related to your department?
- Do you think your rivals use CI practices to gather information about you and use it to compete against you?