

## LEADERSHIP COMPETENCIES AND BUSINESS PERFORMANCE IN THE HOTEL INDUSTRY

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**Purpose:** The aim of this study is to investigate the relationship between hotel managers' leadership competencies, such as cognitive competencies, functional competencies, social competencies, and meta-competencies, and high hotel performance.

**Design/methodology/approach:** A qualitative comparative analysis using a fuzzy set (fs/QCA) was conducted, examining the configurations of leadership competencies that are associated with hotel performance. This method is suitable for analyzing the relationship between the outcome (i.e. hotel performance) and all possible combinations of potential causal conditions (i.e. cognitive, functional, social, and meta-competence of hotel CEOs).

**Findings:** The results reveal the existence of different configurations that lead to the desired performance outcomes. Each configuration combines two or three causal conditions – leadership competencies. Three solutions were found to explain how different leadership competencies of hotel CEOs configure the achievement of high hotel performance.

**Practical implications:** The existence of alternative configurations indicates that hotels may follow alternative paths to achieve high performance (as measured against competitors) in conjunction with the different combinations of leadership competencies of their top managers. Focusing on just one competence (i.e. cognitive, functional, social, and meta) is insufficient to achieve high performance. Each leadership competence must be analyzed in combination with at least one more to allow the hotel to achieve its performance objectives.

**Originality/value:** By examining hotels on the Baltic Sea coast in Poland this research contributes to understanding how the leadership competencies of hotel managers, such as cognitive, functional, social and meta-competencies combine and interact to build high hotel performance. Unlike quantitative estimation techniques, fs/QCA is not symmetric. Thanks to the use of fs/QCA, it was also checked which combinations of leadership competencies lead to low hotel performance. As research results indicate, low hotel performance is caused by a combination of low cognitive, functional and social competencies. Importantly, although hotel managers' social competencies are important for high hotel performance, they are irrelevant for low hotel performance.

**Keywords:** leadership, competencies, hotel performance, hotel manager, fs/QCA.

**Category of the paper:** research paper.

## 1. Introduction

Over the past six decades, the tourism industry has been the leading and fastest growing industry in almost the entire world (Alizadeh, Isa, 2015; Liu-Lastres et al., 2022; Gursoy et al., 2022), and tourism affects many sectors of the economy. Tourists spend money on dining, sightseeing, shopping, culture, and a wide variety of leisure activities, but above all on accommodation, making the hotel industry the most important part of the tourism industry. The multifaceted nature of tourism and hospitality makes the industry one of the largest and fastest growing in the world.

Poland is part of the global tourism market with the number of foreign tourists visiting increasing year on year. Seacoasts, both in Poland and worldwide, are the most used type of tourist space. The Polish Baltic coast is the main area of leisure tourism in Poland. The coastal region concentrates on the largest number of hotel places and facilities nationwide. With the growing interest in Polish seaside destinations among foreign tourists, there has been a dynamic, quantitative development of the hotel base over the past two decades. As a major component of the tourism industry, the hotel sector is one of the largest contributors to the Gross Domestic Product (GDP) of the global economy World Travel and Tourism Council (WTTC, 2021).

The crisis caused by the pandemic situation and the war in Ukraine has caused hotel companies to face additional problems and difficulties. Furthermore, in the face of globalization trends, market changes, and technological innovations, service industries must maintain and further increase their competitive edge. An important factor in the success of a company is the quality and competence of its managers. The above applies even more so to managers in the hospitality industry, a sector that has recently been hit hard by the Covid-19 pandemic and the restrictions put in place. Tourism still accounts for the largest and still growing industry in the world (Goeldner, Ritchie, 2009; Lin et al., 2022) and the quality of services provided, the growth of the tourism business, and the maintenance of a competitive advantage rely heavily on the work and commitment of managers.

Human capital, which refers to the knowledge, competencies, aptitudes, and skills of people that enable innovation and organizational development (Baron, Armstrong, 2007) is critical to the success of hotels (DiPietro, 2008; Salama et al., 2022; Alreahi et al., 2022). The process of hotel management is becoming extremely dynamic and complex, where managers have to deal with many issues and difficulties, as well as the rapid changes and challenges of operating in today's turbulent economy. These challenges are increasing the demands and role of managers in the hospitality industry, where developing leadership competencies to meet specific conditions and achieve desired hotel performance is becoming crucial. Hotel performance is often found in the literature by comparison with competitors and as evidenced by, among others work of (Robinson, 2006; Cong, Hai, 2015).

Leadership competencies, also in the hotel sector, are the subject of research in many countries, where numerous researchers have come to independent conclusions about the requirements for effective leadership (Brownell, 2008; Chung-Herrera et al., 2003; Kay, Moncarz, 2007). After decades of research, no single set of managerial competencies has been defined that is appropriate for each entity or tailored to economic conditions in conjunction with achieving high hotel performance. As is accepted in the literature for, which is continued by researchers of the area of competence in a similar approach, competencies can include motives, traits, self-image, attitudes or values, knowledge of specific content areas, as well as cognitive, behavioral, or physical skills. Based on a critical analysis of the literature, drawing on the research findings contained therein and the analyses conducted, the following leadership competencies of hotel managers were selected for study: cognitive competencies, functional competencies, social competencies, and meta-competencies. The aim of this study is to investigate the relationship between hotel managers' leadership competencies, such as cognitive competencies, functional competencies, social competencies, and meta-competencies, and high hotel performance. The cognitive objective will be pursued through a qualitative comparative analysis using a fuzzy set (fs/QCA). This method is suitable for analyzing the relationship between the outcome (i.e. hotel performance) and all possible combinations of potential causal conditions (i.e. cognitive, functional, social, and meta competence of hotel CEOs). The fs/QCA method will be used to identify and determine possible combinations of the identified factors.

This paper begins with the theoretical background and development of propositions, followed by an overview of materials and methods. The results are presented and discussed in the next section. The work ends with a summary and conclusions.

## **2. Theoretical background and development of propositions**

Researchers have tried over the years to trace and understand what allows a business manager to excel and succeed. Leaders play a significant role in shaping goals, strategies, and business decisions (Asree et al., 2010). A business manager is a person who can create a vision for an organization or group and protracts to skillfully influence those who are to implement that vision. They must provide three capacities to shape the vision, to inspire, and to influence (Anand, Punia, 2015) and must also develop trusting relationships with subordinates and empower them by recognizing and clarifying their roles in the organization (Martínez-Córcoles et al., 2020). A good business manager focuses on what he or she is like (leadership qualities), what he or she knows (leadership skills and knowledge), and what he or she does (leadership behaviors and attitudes) (Arasli et al., 2020). Being competent, as defined, means having the ability to do what one is supposed to do by having the right knowledge, skills, abilities, and attitudes (Siu, 1998). There are many interpretations and definitions of the concept of

competence. Competence is the ability to do something well and the skills, knowledge, and personal qualities that produce beneficial results (Galvin et al., 2014; Holtkamp et al., 2015). M. Grzeda (2014) in an attempt to reduce conceptual ambiguity, based on a review of many definitions of competence, breaks it down into the following components: skills, knowledge, and attitudes (KSAs), distinguishing it from others using 'abilities', 'behaviors' or 'attitudes' as a third component. Competence can be viewed in two ways, that is: as a trait of the individual related to personal, individual attributes (Zegward, Hodges, 2003), or as traits related to technical skills (Hodges, Burchell, 2003).

Leadership is the combination of knowledge, skills, experience, behaviors, and attitudes to transform an organization or business into a cohesive organism that will compete effectively in the marketplace (Asree et al., 2010). Leadership can be defined as the broadly defined ability to influence others to achieve organizational goals (Arasli et al., 2020). J.F. Williams and M.D. Winston (2004) argues that leadership competencies represent the areas of knowledge and skills that are essential for effective, leaders. Leadership competencies include the abilities, skills, knowledge, and personal qualities possessed by leaders and are associated with three specific leadership styles: (a) intellectual, (b) managerial, and (c) emotional (Galvin et al., 2014). E. Suh et al. (2012) undertook a study to identify key competencies that contribute to the success of future managers in the hospitality industry. The study identified six dimensions of key competencies, namely: (1) hospitality skills, (2) interpersonal skills, (3) supervisory skills, (4) food and beverage management skills, (5) leadership skills, and (6) communication skills. M.J. Dolasinski and J. Reynolds (2019) also undertook research into leadership competencies in relation to achieving success in the hospitality industry. They identified six factors of leadership competencies in hospitality, including soft skills, leadership skills, and interpersonal, organizational, relational, and self-management competencies. J. Winterton et al. (2005) make the following equivalence: knowledge is cognitive competence; skills belong to functional competence, and attitudes are linked with social competence.

Based on a critical analysis of the literature on the subject and in view of the fact that competencies can be assigned to different categories, which depend on their relationship with functional aspects of work, the personality of the individual, psychological predispositions, or the operational ability to perform the professional role, the paper adopted competencies for the analyses in the empirical part with the following division on categories: cognitive competencies, functional competencies, social competencies, and meta-competences. Knowledge-related competencies constitute the cognitive competence category, technical skills the functional competence category, and behaviors and attitudes the social competence category. In addition, following (Briscoe, Hall, 1999), personal abilities to assess and understand a situation at a given point in time constitute the meta competence category.

A rich body of work in the field of management indicates that managers face several challenges, should possess a range of competencies, and acquire many skills, both qualitative and quantitative, to effectively carry out the tasks and functions assigned to them. Years of

research on hospitality management have shown that hotel managers should meet specific requirements in addition to those needed for management in general (Walke, 2004; Rees, Porter, 2008). When analyzing the work of hotel managers, it is not difficult to see that their job is even more complex and demanding, as it also deals with issues of cultural diversity among others.

The hotel industry, where services are provided to a variety of customers with different requirements and emotional states, causes hotel managers to be exposed to high levels of stress and experience complexity in forecasting and decision-making. This requires managers to have additional competencies, related to assessing and understanding the situation at a given point in time (Pirnar, 2014), which competencies are called meta-competencies. Meta competencies (motives and traits) are higher-order personal competencies that refer to the ability to understand a situation, adapt and apply existing competencies or acquire new competencies when needed. Following S.R. Kandula (2006), distinguishing between competencies and meta-competencies, indicates that meta-competencies include: engaging in activities that require functional intelligence, engaging in non-routine and non-programmed tasks, dealing with complex and changing aspects of the environment, thinking analytically and being able to engage in generalized and varied tasks, and being non-specific and being able to lead.

Hotel managers are also expected to have knowledge of norms as rules and practices for different social, geographical, and cultural environments (Pirnar, Genç, 2009). Apart from intercultural communication and the area of multifaceted guest services, there are other aspects of hotel operation that require managers to have specialized knowledge of, for example, accounting, project management, or financing, which are included in the cognitive competencies. Cognitive competencies (knowledge) are related to the conceptual knowledge of the individual. Cognitive competencies enable the individual to approach problem-solving processes by treating each issue as a component of a larger system, rather than as an independent aspect with unrelated consequences (Ackoff, Addison, 2010). Cognitive competencies refer to the ability to think and analyze information and situations, which are an essential part of the hotel management process.

Hotel managers need to have competencies, skills, and familiar with various types of techniques in the following areas: benchmarking, marketing, interviewing, purchasing processes, interpersonal skills, creativity, assessing the fit between potential candidates and the requirements of the position, technical competence, ethics, planning, flexible programming, quality management, safety and security management, e-tourism applications and legislation, i.e. issues included in functional competence (Shariff et al., 2014; Kay, Russette, 2000; Suh et al., 2012).

Functional competencies (skills) refer to an individual's technical skills related to the job. These include, depending on the position, interviewing and selection skills and assessing the fit between potential candidates and the position and the organization, responsibility for implementing quality standards in the organization, crisis management skills, IT (computer) skills, and financial analysis and cost control, among others (Suh et al., 2012; Kay, 2007).

In addition, the nature of the hospitality industry causes hotel managers to be expected to have social skills and competencies, manifested by, among other things: acting and adapting appropriately to different situations, being able to cooperate with others, and adopting attitudes appropriate to the situation (Clarke, Chen, 2007). Social competence (attitudes and behaviors) is related to an individual's interpersonal attitudes and behaviors and their ability to interact effectively with others. Social competence is the ability to recognize and understand the emotions of others and to use such information to perform better (Emmerling, Boyatzis, 2012). The importance of having social skills by managers in today's dynamic business environment is very high. Social competence refers to the ability to understand other people's concerns, feelings, and emotional states, build and maintain positive relationships, and behave appropriately in social interactions. This is important also because a hotel manager has to deal with so many different people from different backgrounds and cultures.

It has been recognized that the leadership competencies of managers are critical factors for business success (Asree et al., 2010; Clarke, 2010), and business success in the hotel industry analyzed means high hotel performance. Business success in the hospitality industry is expressed by hotel performance, which can be assessed and measured using various indicators and metrics. Hotel performance can be measured using three dimensions: (1) efficiency, including occupancy, average room rate, and sales growth per room; (2) productivity, including return on investment (ROI) and profit margin; and (3) adaptability, including the number of new services or products, introduced successfully and the percentage of sales derived from new services or products (Phillips, 1996). The occupancy rate is important in that it indicates whether a hotel is attracting customers, which is directly related to the quality of services provided or prices offered, and to the success of a hotel.

For achieving a successful end result, in this case, hotel performance, a manager needs to possess and apply various competencies and capabilities, such as flexibility, cognitive competence, creativity, hard-mindedness, motivational skills, social competence, technological knowledge, functional competence, communication skills, personal skills, language skills, leadership qualities, among others, finished with tremendous effort and energy (Bossid, 2011; Suh et al., 2012). Furthermore, in their study, A. Van and J. Ernst (2005) mentioned that for effective and efficient results it is important not only to get things done but to get the right things done, which requires not only social skills but also project skills and knowledge management capabilities.

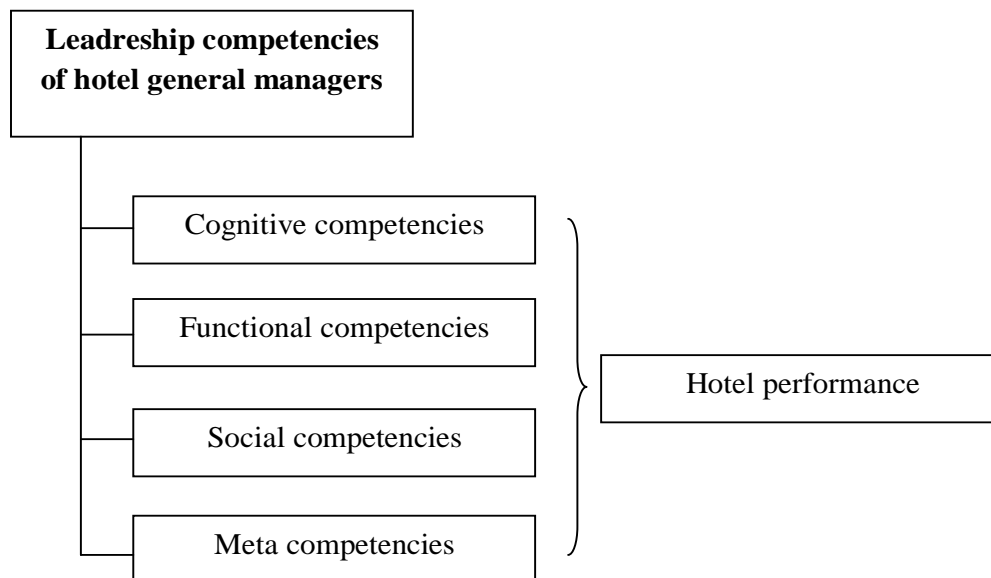
Based on a review of the literature on hotel manager competencies, which identifies a range of skills, motives, behaviors, knowledge, and other attributes associated with the achievement of positive results by these managers and, consequently, with hotel performance, this study divides competencies into four categories. These include cognitive competencies, functional competencies, social competencies, and meta-competencies. On the basis of the theoretical background, the following propositions can be made:

*Proposition 1. Cognitive, social, functional, and meta-competencies of hotel managers lead to hotel performance.*

*Proposition 2. Various combinations of cognitive, social, functional and meta-competencies of hotel managers lead to high hotel performance.*

### 3. Materials and methods

This study identified which configurations of leadership competencies are conducive to the high performance of hotels. Leadership competencies consisted of cognitive, functional, social, and meta-competencies (illustrated in Figure 1).



**Figure 1.** Diagram of the research model.

Source: own study.

The sample for this study was collected in the last quarter of 2022 and the first quarter of 2023. The sample consists of 157 managers from 23 hotels with 3-, 4- and 5-star ratings. The hotels are located on Baltic Sea Coast the area with the largest tourist reception in Poland. The questionnaires were completed individually. A designated person visited 23 hotels in order to explain the characteristics and instructions for filling in the questionnaires and to dispel any questions that arose during the completion of the questionnaire. Table 1 summarizes the main sample characteristics.

**Table 1.**  
*Characteristics of the research sample*

Category		Statistic
Hotel level	Hotel rating	3 stars (43,5%)
		4 stars (30,4%)
		5 stars (26,1%)
	Hotel age	< 5 years (30,4%)
		6-10 years (43,5%)
		> 11 years (26,1%)
Respondent level	Gender	Female (41,5%)
		Male (58,5%)
	Education	Higher (61%)
		Secondary (24%)
		Other education backgrounds (15%)
	Age	< 30 (28%)
		31-45 (46%)
		> 46 (26%)
	Position	Manager: reception manager, director of the bar and restaurant, chef, housekeeping manager, and entertainment manager (76%)
		CEO (24%)
	Working experience of respondents	3-5 years (35,4%)
		6-10 (54,4%)
More than 10 years (10,2%)		

Source: own study.

The questionnaire that was applied in this study covered leadership competencies like cognitive, functional, social, and meta-competencies and the outcome variable – hotel performance compared to competitors. The items adopted in this research were selected from prior studies. All scales followed a five-point Likert format. Cognitive competencies are measured using eight items and include issues relating to decision-making, strategic thinking, critical thinking, and analytical skills. Technical competencies that help in performing concrete activities for running day-to-day business operations were grouped under functional competencies. Functional competencies are measured by twelve items and refer to job-specific skills such as revenue management skills, employee performance appraisal skills, and IT skills. Interpersonal competencies that are useful in establishing and maintaining relationships with others were categorized as social competencies. Social competencies are measured by nine items and relate to skills such as effective communication, teamwork orientation, and developing and coaching others. Finally, meta-competencies included overarching personal competencies such as self-awareness, self-management, and achievement orientation which enable an individual to understand, monitor, and manage their own performance. Meta competencies are measured by thirteen items and refer to abilities that underpin the development of other competencies, as well as intrinsic personality traits. All variables relating to leadership competencies were developed from the research of (Bharwani, Talib, 2017) as well as the work of (Lenehan, 2000; Chung-Herrera et al., 2003; Testa, Sipe, 2012; Jeou-Shyan et al., 2011). The performance of hotels in this study is presented by comparison to competitors and is based on the work of (Robinson, 2005; Cong, Hai, 2015). The performance is measured by eight items. Details of the scale are in Appendix 1.



The sample data were analyzed using fuzzy set qualitative comparative analysis (fs/QCA). Fs/QCA is an empirical method based on Boolean algebra that allows a configurational examination of the causal relation between a group of antecedent conditions and related outcome (Ragin, 1989; Ragin, 2000). This methodology offers a set-theoretical approach to causality analysis as regards conditions and outcome (Ragin, 2008). This method acknowledges that different combinations might explain the outcome; in other words, different combinations of attributions can explain the same outcome. Analyses using qualitative comparative analysis (QCA) methods have been successfully performed in numerous studies in the social sciences e.g. (Kwiotkowska, 2018; 2022; Kwiotkowska, Gębczyńska, 2021; Gębczyńska, 2021; 2022).

The measurement scales used in this type of analysis do not have to be specifically designed for fs/QCA. By calibrating the original variables, any continuous variable can be transformed into another continuous variable that ranges from 0 to 1. Each calibrated value can then be interpreted as the degree of membership to a set, where 0 represents full non-membership and 1 represents full membership. The fs/QCA 3.0 software was used to conduct the analysis in this study.

Fs/QCA was used to test our research propositions by evaluating the degree of influence of the four leadership competencies on hotel performance. We sought to understand whether leaders (i.e., hotel managers) should focus on the four competencies or whether any one competency is of particular relevance. The descriptive statistics for the initial data provide a better understanding of the methodology. The statistics for the four conditions and the outcome are reported in Table 2 based on the scores assigned by respondents.

**Table 2.**

*Descriptive data for the conditions and outcome*

Conditions and outcome	Valid N	Mean	Standard Deviation	Minimum	Maximum
Cognitive competencies	157	3.14	0.63	1.30	5.00
Functional competencies	157	3.93	0.72	1.50	5.00
Social competencies	157	3.12	0.93	1.20	4.00
Meta competencies	157	3.18	0.63	1.30	4.00
Hotel performance	157	3.72	0.91	1.50	5.00

Source: own study.

Before preparing for fs/QCA, we validated the scales and dimensions used in this study. The internal consistency measure of Cronbach's alpha was used to verify the reliability of each dimension of the scale. The evaluation of the scales showed that all Cronbach's alpha values were above 0.70 (Nunnally, 1978).

## 4. Results

In this study, five factors were analyzed. The four leadership competencies (cognitive, functional, social, and meta) were used as antecedent conditions, and hotel performance was used as the outcome.

Each of these quantitative variables was calibrated to determine the degree of membership to previously defined sets. We identified key dimensions and interpreted them as a set in which cases could have different degrees of membership. In fs/QCA, each continuous variable is transformed through a process of calibration into a categorical variable (i.e., a fuzzy set) that is used to indicate the degree of membership of a case to that set. These sets are shown in Table 3.

**Table 3.**  
*Definitions of set*

Conditions/Outcome		Set Membership
Outcome	Hotel performance	High hotel performance
Antecedent condition	Cognitive competencies	Managers with high cognitive competencies
Antecedent condition	Functional competencies	Managers with high functional competencies
Antecedent condition	Social competencies	Managers with high social competencies
Antecedent condition	Meta competencies	Managers with high meta competencies

Source: own study.

Calibration requires setting three anchor points that define full set membership of a case in a set, full non-membership, as well as the point of maximum ambiguity between membership and non-membership. These anchor points need to be theoretically motivated and built on substantive criteria external to the data (Ragin, 2008). By convention, fuzzy-set membership scores range between 0 (full non-membership) and 1 (full membership), with 0.5 denoting the threshold between set membership and non-membership (Ragin, 2008). Raw data are usually transformed into set membership scores by the so-called "direct method", using a logistic function in order to fit data in between the three qualitative anchors (Ragin, 2008; Schneider, Wagemann, 2012). Because our data were based on Likert scales and as we sought to capture with our sets the distinct presence of leadership competencies, and performance in a case, we put the 0.5 threshold for all sets at 3.5; that is, higher than the "neutral" Likert-scale value of 3. We used 5 as a value for full membership and 1 for full non-membership, and we employed the transformation function in the fs/QCA 2.5 software package using the log odds of full membership to transform our original interval scale variables into continuous fuzzy membership scores (Ragin, 2008; Fiss, 2011).

#### 4.1. Analysis of individually necessary conditions

In accordance with the QCA literature, we used fs/QCA to test whether any of our four conditions (cognitive, functional, social, and meta-competencies) could be considered individually necessary for the outcome (high hotel performance). A high threshold for the assessment of the consistency of necessity is required to reduce the likelihood of logical contradictions and to avoid pitfalls of hidden or false necessary conditions (Schneider, Wagemann, 2012). The resulting consistency scores for the necessity of the three individual conditions or their negation (see Table 4) did not allow us to consider any of the conditions as individually necessary for high performance.

**Table 4.**

*Analysis of individual necessity of conditions for high firm performance*

Conditions	High hotel performance	
	Consistency	Coverage
Cognitive competencies	0.51	0.48
~ Cognitive competencies	0.54	0.52
Functional competencies	0.63	0.42
~ Functional competencies	0.68	0.55
Social competencies	0.45	0.49
~ Social competencies	0.68	0.50
Meta competencies	0.64	0.47
~ Meta competencies	0.73	0.53

Note: ~ logical negation - the absence of conditions.

Source: own study.

#### 4.2. Analysis of sufficient configurations of conditions

To identify combinations of conditions that are logically sufficient for the presence of the outcome, the next step involves the construction of so-called truth tables, which represent in their rows all logically possible combinations of conditions. The truth table has  $2^k$  configurations or rows, where  $k$  is the number of conditions (Ragin et al., 2004). In our case, the number of conditions is  $2^4 = 16$ . According to Ragin et al. (2004), the value 1 for each configuration indicates that the score of the calibrated variable is greater than or equal to 0.5 and the value 0 indicates that the score of the calibrated variable is lower than 0.5. The consistency of each configuration is shown based on the relation of the subset with the outcome. Because the sample size was relatively low, configurations with a single case were eliminated. The next step was to select a consistency threshold to distinguish causal combinations that were subsets of the outcome from those that were not. According to Ragin (2008)], values below 0.75 in this column generally indicate substantial inconsistency. We selected 0.85 as the consistency threshold. We assigned the value 1 to the outcome (high hotel performance) if the consistency of a given configuration exceeded the 0.85 threshold. Otherwise, the value 0 was assigned (Table 5).

**Table 5.**  
*Truth table for high hotel performance*

Row	Conditions				Number of cases	Raw consistency	PRI consistency	Outcome High performance
	Cognitive competencies	Functional competencies	Social competencies	Meta competencies				
1	1	1	1	0	23	0.94	0.86	1
2	1	1	0	1	31	0.92	0.84	1
3	0	1	1	1	13	0.90	0.77	1
4	1	0	1	1	11	0.95	0.87	1
5	1	1	0	0	15	0.77	0.62	0
6	0	0	1	1	10	0.78	0.69	0
7	1	1	0	0	13	0.68	0.93	0
8	1	0	1	0	12	0.65	0.21	0

Note: PRI, Proportional reduction in consistency.

Source: own study.

The resulting intermediate solution consists of three combinations that are sufficient to high hotel performance. The complex and parsimonious solutions can be viewed as the two extremes of a single complexity–parsimony continuum. As evidenced by Ragin et al. (2004) "An optimal intermediate solution can be obtained by removing individual causal conditions that are inconsistent with existing knowledge from combinations in the complex solution, while maintaining the subset relation with the most parsimonious solution". These intermediate solutions use only a subset of the simplifying assumptions that are used in the most parsimonious solution. Table 6 summarizes our three solutions. In line with previous QCA studies, these solutions can be interpreted as alternative paths associated with the outcome (high hotel performance).

**Table 6.**  
*Intermediate solutions leading to high hotel performance*

Solutions	Sets	Raw Coverage	Unique Coverage	Consistency
S1	Cognitive competencies*Social competencies	0.59	0.10	0.90
S2	Cognitive competencies*Functional competencies*~ Meta competencies	0.54	0.09	0.85
S3	Functional competencies*Social competencies*Meta competencies	0.55	0.05	0.86
Overall solution coverage: 0.64.				
Overall solution consistency: 0.88.				
Note: * logical AND; ~logical negation.				

Source: own study.

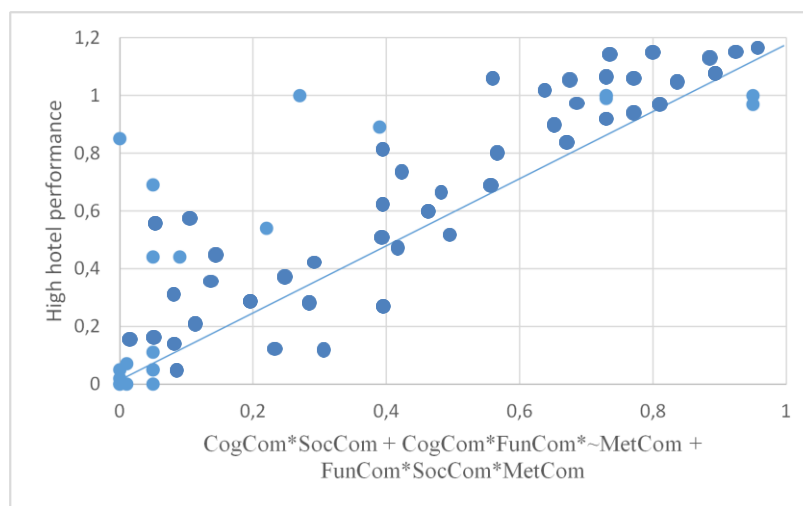
The final solution can be expressed as follows:

Cognitive competencies \* Social competencies + Cognitive competencies \* Functional competencies \* ~ Meta competencies + Functional competencies \* Social competencies \* Meta competencies

Note: \* logical AND; + logical OR

The three combinations shown in Table 6 are sufficient to high hotel performance in 88% of cases. These combinations cover 64% of cases. The combination (S1) of high cognitive competencies and high social competencies leads to high hotel performance compared to competitors. Similarly, the combination (S3) of high functional competencies, high social competencies, and high meta competencies also leads to high hotel performance. There is also a third configuration (S2) leading to high hotel performance that combines high cognitive competence and high functional competencies and, rather surprisingly, low meta-competencies. Functional and meta-competencies in solution S1, social competencies in solution S2, and cognitive competencies in solution S3 represent so-called "do not care" conditions (Fiss, 2011) or conditions whose presence or absence does not matter for the outcome.

Figure 2 represents the consistency and coverage of the solution on a scatter plot of the solution against the result. A combination (set) for which all calibrated scores are systematically less than or equal to the scores of the outcome (upper triangle) is said to be a subset of the outcome with high consistency. The cases (departments) that are below the diagonal are inconsistent with the outcome. Those that are above the diagonal are consistent.



**Figure 2.** Plot of “high hotel performance” against “Cognitive competencies \* Social competencies + Cognitive competencies \* Functional competencies \* ~ Meta competencies + Functional competencies \* Social competencies \* Meta competencies”.

Source: own study.

As C.C. Ragin (2000) points out in the sufficiency analysis, the membership scores of the outcome should be compared not only with the score of each individual condition but also with the scores of all possible causal expressions. If all cases are above the diagonal, it means that the membership scores of the outcome are consistently greater than the causal configuration's membership scores. Therefore, a causal expression is a subset of the outcome is the set-theoretic way of expressing sufficiency. The top corner above the diagonal represents the cases that are most consistent with the solution. The top corner below the diagonal, on the other hand, represents the cases that are most inconsistent with the solution. Given the numerous representation of cases in the upper corner above the diagonal and their very limited number in

the corner below the diagonal, it can be concluded that there are no serious inconsistencies in the solution.

Our final stage of the analysis was a series of robustness checks. The discussion on appropriate robustness tests of QCA analyses is not yet well developed in published empirical studies of QCA in management (Wagemann, Buche, 2016). Measures proposed in the methodological literature to assess the robustness of QCA results include (1) analyses for the absence of the outcome, (2) different calibration thresholds, and (3) varying consistency thresholds (e.g. Schneider, Wagemann, 2012).

Our solution, in the absence of the outcome, indicated one configuration, which is presented in Table 7.

**Table 7.**  
*Intermediate solutions leading to low hotel performance*

Solutions	Sets	Raw Coverage	Unique Coverage	Consistency
S2	~Cognitive competencies * ~Functional competencies * ~Meta competencies	0.61	0.07	0.83
Overall solution coverage: 0.61				
Overall solution consistency: 0.83				
Note: * logical AND; ~logical negation.				

Source: own study.

With a coverage of 61% and a consistency of 83%, the combination of low cognitive, functional and social competencies is sufficient for low hotel performance. It is worth noting that although the social competencies of hotel managers are important for achieving high hotel performance, they are not relevant for low hotel performance.

## 5. Discussion and conclusions

The purpose of this study was to investigate the relationship between leadership competencies of hotel managers, such as cognitive, functional, social, and meta-competencies, and high hotel performance. The size of the research sample included 157 managers from 23 hotels with 3-, 4- and 5-star ratings located on the Baltic Sea Coast in Poland. We addressed our research aims using fs/QCA. This method is suitable to analyze the relationships between an outcome (i.e., hotel performance) and all possible combinations of potential causal conditions (i.e., cognitive, functional, social, and meta-competencies of hotel managers). The fs/QCA method was used to identify the possible combinations of these factors.

The analysis identified three configurations leading to high hotel performance in 88% of cases, with a coverage of 70%. Cognitive competencies occur in two configurations: S1 and S2, where high social competencies can be replaced with high functional competencies

in combination with low meta-competencies. These findings are consistent with the views of (Asree et al., 2010) who report a positive impact of cognitive competencies on the organization. A cognitive competency is an ability to think or analyse information and situations that leads to or causes effective or superior performance of the organization. In the S1 configuration, high hotel performance is achieved when, in addition to high cognitive competencies, leaders also have high social competencies. Social competencies are the ability to recognize and understand the emotions of others, as well as use such information in order to achieve superior performance (Emmerling, Boyatzis, 2012). High performance can be achieved by hotels with a configuration in which high cognitive competencies of hotel managers combined with high functional competencies and low meta-competencies are present. Competence can be a source of competitive advantage for an organization because, in an organization where the competence approach is neglected, the desired level of performance cannot be achieved (Hill, Jones, 2015). Functional competencies (skills) refer to an individual's job-specific technical skills. As research indicates (Masoud, 2013) there is a significant impact of functional competence on company performance.

Finally, when meta-competencies are combined with high cognitive and functional competencies, they lead to high hotel performance despite their low levels. On the other hand, when combined with high social and functional competencies, they also lead to high hotel performance, but this time also their level is high.

While several studies of competencies in the hospitality industry have been conducted, the competencies of the CEO in the hospitality industry have been marginalized. The manager of the hotel industry should have a number of competencies allowing him to achieve success in the form of high hotel performance. The meta-competencies of the manager of the hotel industry constitute an area that is not understood empirically to a large extent. As our research results show, their level depends on a specific context. Sometimes a high level of these meta-competencies is desirable, while in others a low level constitutes a significant contribution of the research carried out. These findings confirm Proposition 1 that cognitive, social, functional, and meta-competencies of hotel managers lead to hotel performance and Proposition 2 that various combinations of different competencies of hotel managers lead to high hotel performance.

It is worth noting that the alternative to having high cognitive competencies is the S2 configuration, which combines the high remaining three competencies of leaders, i.e. functional, social, and meta-competencies. This finding indicates that regardless of whether the cognitive competencies are high or non-binding if the other three conditions hold (the remaining three competencies are high), managers will contribute to the high hotel performance. This result is consistent with the findings of the research area. Each combination has a coverage of between 59% and 55%.

In conclusion, as indicated by the results of the conducted empirical research, the combination of high cognitive competencies and high social competencies is sufficient for high hotel performance. The same outcome is achieved with high functional, social, and meta-competencies or with high cognitive and functional competencies and low meta-competencies. No single condition is alone sufficient to guarantee high hotel performance. The existence of alternative configurations indicates that hotels may follow alternative paths to achieve high performance (as measured against competitors) in conjunction with the different combinations of leadership competencies of their top managers. Focusing on just one competence (i.e. cognitive, functional, social, and meta) is insufficient to achieve high performance. Each leadership competence must be analyzed in combination with at least one more to allow the hotel to achieve its performance objectives.

Unlike quantitative estimation techniques, fs/QCA is not symmetric. Therefore, we studied which combinations of leadership competencies lead to low hotel performance. The combination of low cognitive, functional and social competencies is sufficient for low hotel performance. Notably, although the social competencies of hotel managers are important for achieving high hotel performance, they are not relevant for low hotel performance.

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## Appendix

**Table 1.**

*Variable questionnaires regarding leadership competencies and hotel performance*

<b>Variables of the leadership competencies questionnaire</b> (Bharwani, Talib, 2017; Lenehan, 2000; Chung-Herrera et al., 2003; Testa, Sipe, 2012; Jeou-Shyan et al., 2011)	
Cognitive competencies	1. Ability to scan the business environment and anticipate emerging opportunities and challenges
	2. Ability to make well-informed, effective, and timely decisions
	3. Ability to develop new insights into situations, question conventional approaches and design and implement new or cutting edge initiatives
	4. Ability to gather relevant information and business intelligence required for decision-making
	5. Ability to establish a systematic course of action to ensure the accomplishment of specific objectives by setting priorities, goals and timetables
	6. Ability to reach well-reasoned conclusions and solutions, grounded in logic, on the basis of observation, interpretation, inference, analysis and evaluation
	7. Ability to take calculated risks to achieve organizational goals
	8. Ability to deal with change, articulate a compelling change vision, manage the change process
Functional competencies	9. Attentiveness and willingness to deal with guest requests, complaints, and problems promptly
	10. Ability to understand and keep abreast of business trends that affect the organization and its stakeholders
	11. Ability to understand customers' perception of product value and optimize product availability and price within each customer segment to maximize revenue
	12. Ability to assess potential candidates' job-fit and organization-fit based on their knowledge, skills, and personality
	13. Promotion of a strong internal culture of quality with the ultimate responsibility for implementing quality standards within the organization.
	14. Ability to develop and use criteria for ensuring the optimal use of available resources
	15. Ability to maintain calm in the midst of chaos and handle the pressures of a crisis through multitasking and delegation
	16. Ability to implement employee performance management systems to align employee performance with performance targets
	17. Ability to effectively engage with internal and external stakeholders, i.e. employees, management, and shareholders by appropriately managing their expectations
	18. Computer literacy skills and knowledge of operations management systems such as hotel property management systems
	19. Ability to monitor expenditures and utilise cost-benefit analysis to vet financial plans and decisions
	20. Knowledge of statutory requirements related to the establishment and operation of hotels such as licenses, permissions and other legal compliances
Social competencies	21. Ability to express oneself clearly to get the message across succinctly and effectively
	22. Knowledge about diverse cultures and intrinsic desire and ability to engage in cross-cultural encounters
	23. Ability to develop and maintain contacts, partnerships and alliances through a personalised approach
	24. Ability to negotiate differences in a calm, non-defensive manner and resolve matters by devising creative resolutions to problems
	25. Ability to co-ordinate the efforts of team members and work effectively to advance the collective goals
	26. Ability to reduce discrimination and promote equal opportunity for all regardless of race, gender, lifestyle or disability
	27. Ability to create conducive ambience at the workplace by inspiring and empowering others to take purposeful action

	28. Ability to listen to and understand spoken and unspoken concerns and thoughts of others
	29. Ability to guide others to develop and contribute to the organisation by providing constructive feedback and offering formal and informal learning opportunities
Meta competencies	30. Ability to remain calm and confident in face of provocation and adversity
	31. Passion for work, driven by motivations other than money or status, such as genuine hospitality towards guests
	32. Belief in one's abilities to handle routine as well as challenging tasks and work situations
	33. Ability to regulate rational and emotional operations of the mind in a balanced way and think before acting
	34. Ability to navigate complex, sensitive situations with internal and external stakeholders with tact and savvy
	35. Ability to manage one's time through self-discipline, controlling interruptions, setting priorities, and meeting deadlines
	36. Propensity to act in an honest and trustworthy manner based on moral conviction to do the right thing
	37. Ability to change behavioral style or method of approach as appropriate to meet the needs of the situation
	38. Mental strength to persistently pursue long-term goals despite occasional failure or adversity
	39. Commitment to personal and professional development and the drive to update one's knowledge and skills
<b>Variables of the hotel performance questionnaire</b> (Robinson, 2005; Cong, Hai, 2015)	
Performance compared to competitors	40. Our company achieve more success than our competitors
	41. In general, our revenue is higher the direct competitor's one
	42. Our larger market share is larger than the direct competitor's one
	43. Our profit is higher than the direct competitor's one
	44. Our profit margin is higher than the direct competitor's one
	45. Our rate of return on investment is higher than the direct competitor's
	46. Our customer loyalty is higher than the direct competitor's one