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H O L I S T I C T H I N K I N G A N D P R O A C T I V E D E C I S I O N M A K I N G W I T H G O A L C O M M I T M E N T O F H O T E L E M P L O Y E E S

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Jieun Kim<sup>α</sup> & H. Michael Chung<sup>σ</sup>

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Proactive decision-making considers objectives, the search for further information, alternatives, and decision radars. The hypotheses regarding the relationship among the variables were empirically tested with hotel employees. The results indicate that the hotel employees' causality, perception of change, and locus of attention were related positively to their organizational goal commitment while their attitude towards contradiction negatively influenced it. Furthermore, holistic thinking did not make a significant direct impact on proactive decision-making. In addition, goal commitment significantly influenced the seeking for more information and use of decision radar, while it failed to influence searching for objectives and alternatives.

Finally, it was found that organizational goal commitment significantly mediates the relationship between holistic thinking and proactive decision-making.

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## I. INTRODUCTION

As customer service is an important factor that affects the economic and strategic stake in the hotel industry, it has attracted significant attention in both academia and the industry (Rao and Sahu, 2013;

Nguyen Nguyen, Ha, Anh, & Matsui, 2015). Often the employees of hotels, particularly in upscale hotels, must go beyond standard operating procedures and address issues with unique and customized solutions (Victorino, Bolinger, & Verma, 2012). In such upscale hotels, customer-facing employees need to be trained beyond the basics to better serve customers.

For hotel employees, this can be addressed by paying attention to holistic and proactive approaches and training. However, the hotel's budget, operating and scheduling constraints, and traditional management culture often deter such actions to be taken into consideration. For example, the mean expenditure for

training per available room in the hotel industry was no more than \$76.03 (Mandelbaum, 2018).

How an employee makes a decision in responding to a given task has been studied with numerous approaches. Thinking style has a significant impact on human decision-making and is a critical predictor (Xiaotian & Jingyu, 2017; Kasser, 2010; Manni & Maharaj, 2004; Pagani & Otto, 2013; Siebert & Kunz, 2015; Wu & Parker, 2013; Khmil, 2013; Huggins, Deb, Claudio, & Velazquez, 2013; Magoutas, Apostolou, & Mentzas, 2015). In particular, holistically thinking individuals make more of a commitment to their organizations (Jaaron & Backhouse, 2014). In addition, proactivity comes with constant commitment towards a specific goal (Parker & Collins, 2010).

Therefore, it is important to study proactive behavior and holistic approaches as a thinking style to better understand its effects on problem solving. In this study, organizational goal commitment was examined as a mediator for the relationship between thinking style and decision-making for hotel employees. The study addresses the following research questions (RQ):

**RQ #1:** Does holistic thinking influence organizational goal commitment and proactive decision-making of hotel employees?

**RQ #2:** What aspects of holistic thinking have a significant impact on decision-making of hotel employees?

**RQ #3:** Does organizational goal commitment influence proactive decision-making of hotel employees?

**RQ #4:** Does organizational goal commitment mediate the relationship between holistic thinking and proactive decision-making of hotel employees?

## II. LITERATURE REVIEW

In this section, holistic thinking, proactive decision-making, and organizational goal commitment and their relationships are discussed, followed by developing the hypotheses.

### a) *Holistic Thinking*

Holistic thinking refers to an individual's awareness of the operation of the overall system and interrelationship of the details when the person considers a situational context and makes decisions (Kasser, 2010; Hitchin, 2007). Holistic thinking consists of causality, attitude towards contradiction, perception

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of change, and locus of attention (Choi et al., 2007). Causality states an individual's cognitive way of understanding a phenomenon. Attitude towards contradiction is an individual's cognitive adoption of moderation, meaning that when two contradictory opposites exist. People with this attribute often tend to choose a middle ground by embracing an opposite view (Choi et al., 2007, p. 693). Perception of change means an individual views a change as a natural flow due to the complex interconnection of each element. Locus of attention describes the identification of the whole picture of context related to an object. Individuals with a holistic locus of attention examine the parts by figuring out the whole picture and understanding a complex phenomenon as an integrated whole. Therefore, holistically thinking individuals consider possible alternatives before coming to a final decision and make an optimal choice that fits in with the ultimate objectives (Ji, Peng, & Nisbett, 2000; Choi, Dalal, Kim-Prieto, & Park, 2003).

*b) Organizational Goal Commitment*

Goal commitment is one's decisiveness to accomplish goals, resistance to abandoning them, and their consistent effort to reach them (Hollenbeck & Klein, 1987; Locke & Lathan, 1990). For example, when everyone in a group is given the same goal, those committed to that goal will perform better than those who are not (Hollenbeck & Klein, 1987; Klein & Wright, 1994). Lau (2012, p9) reported the significant impact of goal commitment on job satisfaction by stating that employees committed to the organization's overall goal tend to be satisfied. Organizational goal commitment helps the individuals accomplish their goals through self-initiated motivation.

*c) Proactive Decision-Making*

Proactive behavior refers to an individual's propensity to make effective change in one's environment (Bateman & Crant, 1993). People scan for opportunities, show initiative, take action, and engage in conscious goal-directed processes (Wu & Parker, 2013), with the core trait of proactive behavior being that an individual can change his/her physical circumstances and social atmosphere with initiative and aspiration. Individuals with proactive tendencies are not likely to be affected by external forces and look to actively interact with the situation. On the other hand, passive individuals react to the situation and are framed by their environment (Parker, Bindl, & Strauss, 2010).

Two dimensions of proactive decision-making are personality traits and cognitive skills (Siebert and Kunz (2015). Personality traits describes taking an initiative and striving for improvement, while cognitive skills consists of the systematic identification of objectives and alternatives, a systematic search for information and the use of decision radar. According to Siebert & Kunz (2015), taking an initiative refers to the

willingness to change a situation to follow one's initiative. Striving for improvement means eagerness to make one's circumstances better and having a proactive orientation rather than remaining passive. Cognitive skills involve activities toward proactive behaviors. The systematic identification of objectives states the awareness of what individuals intend to reach, while systematic identification of alternatives is the extension of various options and openness to possible alternation of choice based on expected outcomes (Siebert & Kunz, 2015). Systematic search for information describes the information search that is relevant to decision-making. Use of decision radar describes visualizing the results and minimizing any potential problems before settling on a final decision (Frese & Fay, 2001; Greenglass, 2002).

*d) Holistic Thinking and Organizational Goal Commitment (Developing Hypothesis 1-1 through Hypothesis 1-4)*

Jaaron and Backhouse (2014) reported a positive relationship between systems thinking and affective commitment. Systems thinking is a holistic perspective where everything is connected to everything else; thus, the only way to fully understand a system is to understand its parts in relation to the whole (Shaked & Schechter, 2016). Resilient organizations require a holistic view and there seems to be a link between how much a holistic style of thinking is valued within an organization and the ability to sustain a satisfactory level of performance (Comfort et al. 2001; Pellissier 2011). With affective commitment which is a model of workplace commitment is an emotional attachment to the organization such that the strongly committed individual identifies with and enjoys membership within the organization (Meyer and Herscovitch 2001; Siders, George, Dharwadkar, 2001). Further, Jaaron and Backhouse (2014) reported the significant positive relationship between systems thinking and an emotional attachment to organizations. Thus, organizational goal commitment can have a positive relationship with holistic thinking.

Based on these arguments, the following hypotheses were developed involving each component of holistic thinking and organizational goal commitment:

*H1-1:* The hotel employees' causality is positively related to their organizational goal commitment.

*H1-2:* The hotel employees' attitude towards contradiction is positively related to their goal commitment.

*H1-3:* The hotel employees' perception of change is positively related to their goal commitment. *H1-4:* The hotel employees' locus of attention is positively related to their goal commitment.

e) *Holistic Thinking and Proactive Decision-Making (Developing Hypothesis 2-1 through Hypothesis 2-16)*

A holistic approach in the decision-making process is derived from the idea that everything is interconnected to each other, which brings about the system to include all opinions so as to draw a shared decision (Ruscio, 2003). A holistic approach focuses on the integration of parts and makes a new paradigm to include various perspectives. Holistic thinkers are unlikely to separate and distinguish each part of the organization, but rather are more likely to look at the system and integration of each unit as a whole. This could lead them to be more attentive of the overall organizational goals (Huggins et al., 2013).

Proactive decision-making describes an active involvement in opportunities, taking initiative, and constant efforts to achieve objectives (Bateman & Crant, 1993; Ruscio, 2003; Dolan, 2008; Siebert & Kunz, 2015). In addition, research on proactivity includes why an individual sets out to master and change one's situation, how he/she can achieve this change, and what the consequences of proactivity are for individuals and organizations (Wu & Parker, 2013).

Those who think holistically tend to search for more information before making a task related choice (Choi, Dalai, Kim-Prieto, & Park, 2003; Phillips et al., 2016). They are more likely to see background information and emphasize complex relationships (Hedden et al., 2000; Ji et al., 2000). Air traffic controllers with a holistic thinking style showed high involvement in proactive decision-making (Xiaotian & Jingyu, 2017). According to Benoit and Miller (2017), when there is a choice overload among products, a negative effect on satisfaction could occur. The study indicates that holistically thinking consumers are able to reduce such negative feelings by mitigating the overload feeling on satisfaction. It has been understood that individuals who think holistically can control negative emotions and move towards alternative options which make them more productive in specific situations.

Based on these arguments, develop the following hypotheses were developed involving each component of holistic thinking and proactive decision-making:

*H2-1:* The hotel employees' causality is positively related to their identification of objectives.

*H2-2:* The hotel employees' causality is positively related to their systematic search for information.

*H2-3:* The hotel employees' causality is positively related to their systematic identification of alternatives.

*H2-4:* The hotel employees' causality is positively related to their use of decision radar.

*H2-5:* The hotel employees' attitude towards contradiction is positively related to their identification of objectives.

*H2-6:* The hotel employees' attitude towards contradiction is positively related to systematic search for information.

*H2-7:* The hotel employees' attitude towards contradiction is positively related to their systematic identification of alternatives.

*H2-8:* The hotel employees' attitude towards contradiction is positively related to their use of decision radar.

*H2-9:* The hotel employees' perception of change is positively related to their identification of objectives.

*H2-10:* The hotel employees' perception of change is positively related to their systematic search for information.

*H2-11:* The hotel employees' perception of change is positively related to their systematic identification of alternatives.

*H2-12:* The hotel employees' perception of change is positively related to their use of decision radar.

*H2-13:* The hotel employees' locus of attention is positively related to their identification of objectives.

*H2-14:* The hotel employees' locus of attention is positively related to their systematic search for information.

*H2-15:* The hotel employees' locus of attention is positively related to their systematic identification of alternatives.

*H2-16:* The hotel employees' locus of attention is positively related to their use of decision radar.

f) *Organizational Goal Commitment and Proactive Decision-Making (Developing Hypotheses 3-1 through 3-4)*

Goal commitment motivates individuals to increase the actions associated with goal accomplishment (Aronson, 1997; Bem, 1972). When an individual recognizes their goals and considers them important to achieve, they tend to make consistent efforts related to goal achievement. Therefore, the hotel employees committed to organizational goals are likely to make more effective decisions. Pedersen (2015) reported school teachers' goal commitment made a positive impact on their task performance, willingness to achieve goals plays a role in enhancing a positive behavior. It is in line with Siebert & Kunz (2015), where they described how taking initiative refers to the willingness to change a situation to follow one's initiative. Striving for improvement is the eagerness to improve one's circumstances and have a proactive outlook instead of staying passive.



If hotel employees take organizational goals seriously and set attainable values, their decisions would be made in a proactive manner. The hypotheses for the relationship between the hotel employees' goal commitment and proactive decision-making are developed as follows:

*H3-1:* The hotel employees' goal commitment is positively related to their identification of objectives.

*H3-2:* The hotel employees' goal commitment is positively related to their systematic search for information.

*H3-3:* The hotel employees' goal commitment is positively related to their systematic identification of alternatives.

*H3-4:* The hotel employees' goal commitment is positively related to their use of decision radar.

*g) Organizational Goal Commitment as Linking Mechanism (Developing Hypothesis 4-1 through Hypothesis 4-16)*

Cerasoli and Ford (2014) reported the relationships between intrinsic motivation, mastery goal orientation, and performance. The relationship between intrinsic motivation and performance were mediated through mastery goal orientation, which indicates that the individuals' will to master their goals fosters the impact of intrinsic motivation on performance. Hwang & Joo (2017) studied the mediating effect of goal commitment in the relationship between leadership and organizational commitment. Furthermore, Choi, Kim, & Son (2012) reported a partially mediating effect of affective commitment for the relationship between self-leadership and innovative behaviors in a military setting.

Thus, organizational commitment seems an effective mediator between antecedent variables and predicted outcomes in the organizations. It is likely that organizational goal commitment mediates for the relationship between the employees' pattern of thinking and decision-making. The following hypotheses are developed to examine the mediating effect of organizational goal commitment on the relationship between holistic thinking and proactive decision-making:

*H4-1:* The hotel employees' organizational goal commitment mediates the relationship between causality and identification of objectives.

*H4-2:* The hotel employees' organizational goal commitment mediates the relationship between causality and systematic search for information.

*H4-3:* The hotel employees' organizational goal commitment mediates the relationship between causality and identification of alternatives.

*H4-4:* The hotel employees' organizational goal commitment mediates the relationship between causality and decision radar.

*H4-5:* The hotel employees' organizational goal commitment mediates the relationship between attitude toward contradiction and identification of objectives.

*H4-6:* The hotel employees' organizational goal commitment mediates the relationship between attitude toward contradiction and systematic search for information.

*H4-7:* The hotel employees' organizational goal commitment mediates the relationship between attitude toward contradiction and identification of alternatives.

*H4-8:* The hotel employees' organizational goal commitment mediates the relationship between attitude toward contradiction and decision radar.

*H4-9:* The hotel employees' organizational goal commitment mediates the relationship between perception of change and identification of objectives.

*H4-10:* The hotel employees' organizational goal commitment mediates the relationship between perception of change and systematic search for information.

*H4-11:* The hotel employees' organizational goal commitment mediates the relationship between perception of change and identification of alternatives.

*H4-12:* The hotel employees' organizational goal commitment mediates the relationship between perception of change and decision radar.

*H4-13:* The hotel employees' organizational goal commitment mediates the relationship between locus of attention and identification of objectives.

*H4-14:* The hotel employees' organizational goal commitment mediates the relationship between locus of attention and systematic search for inform.

*H4-15:* The hotel employees' organizational goal commitment mediates the relationship between locus of attention and identification of alternatives.

*H4-16:* The hotel employees' organizational goal commitment mediates the relationship between locus of attention and decision radar.

### III. RESEARCH METHODOLOGY

Section 3 describes the conceptual model of the empirical study, survey instruments and data collection.

*a) Conceptual Model*

Figure 1 shows the conceptual framework that presents the relationship among holistic thinking, organizational goal commitment, and proactive decision-making.

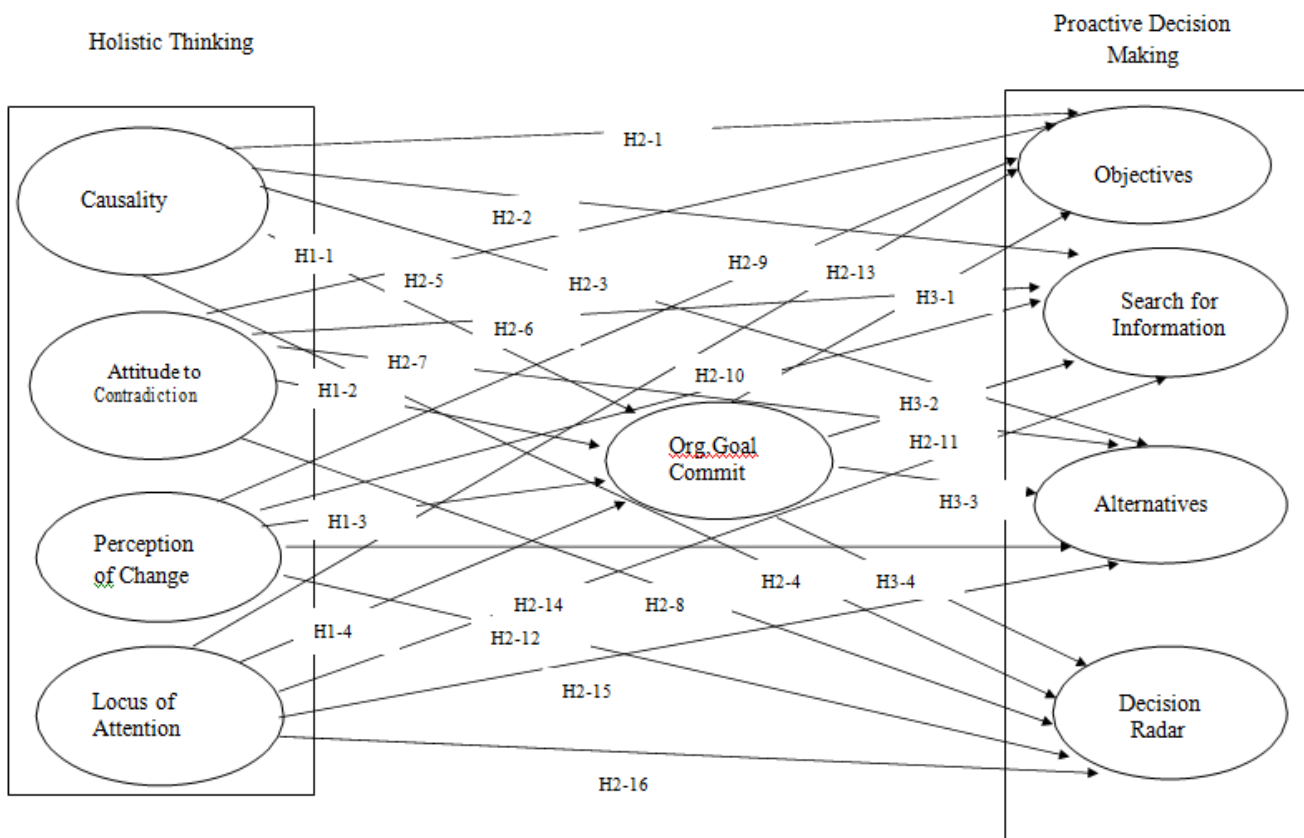


Figure 1: Conceptual model

b) Survey Instruments

**Holistic Thinking:** The instruments developed by Choi et al. (2007)'s 24-item scale were used to test holistic thinking. Holistic thinking includes sub-variables of causality, attitude towards contradiction, perception of change, and locus of attention. Subject responses were recorded using a 7-point Likert scale.

**Organizational Goal Commitment:** The evaluation of organizational goal commitment was based on a 5-item scale by Klein et al. (2001). The same 7-point Likert scale was used.

**Proactive Decision-Making:** Hotel employees' proactive decision-making was measured using Siebert and Kunz's (2015)'s 19 items of cognitive skills in proactive decision making. The four variables employed are objectives, information, alternatives and the use of decision radar. The respondents were asked to rate their decision-making behaviors in the workplace using the same 7-point Likert scale.

c) Data Collection

Following a pilot test of fifty subjects from two hotels, the main survey was conducted at top-rated five star hotels in Korea. Eleven hotels were contacted using convenience sampling. The study objective and the survey method were explained to the hotel senior management as well as operational level managers. Seven top-rated five star hotels agreed to participate in

this study: the JW Marriot, Grand Hyatt, The Shilla, Sheraton, Millennium Hilton, Westin, and Paradise hotels. The survey materials were then distributed according to the scale of the hotels; 35 cases for hotels with 290 to 399 rooms, 45 cases for hotels with 400 to 499 rooms, and 50 cases for hotels with 500 to 700 rooms. A total of 289 responses were collected out of the 300 surveyed, and 272 survey responses were valid and used for the analysis.

IV. RESULTS

Section 4 describes demographic information of the survey followed by validity and reliability, confirmatory factor analysis and correlation matrix. Then, it presents the details of the hypotheses testing.

a) Demographic Information

As summarized in Table 1, nearly 70% of the respondents are full time employees of a hotel. Nearly 80% of the employees are either a clerk or a supervisory level employee. Slightly less than half of the employees have up to three years of work experience and about 40% of the employees have 4-9 years of work experience. Slightly more than half of them are female and the majority of employees are in their 20's and 30's. Roughly half of them have at least a bachelor's degree.

Table 1: Demographics of the Survey

Respondents' Characteristics	Items	Frequencies (%)	Respondents' Characteristics	Items	Frequencies (%)
Gender	Male	114(41.9)	Employment Status	Full time Temporary Contract	185(68.0) 87(32.0)
	Female	158(58.1)			
Age	20~29	140(51.5)	Department	Room Division Back Office F&B Catering Others	70(25.7) 52(19.1) 79(29.0) 56(20.6) 15(5.5)
	30~39	103(37.9)			
	40~49	23(7.5)			
	50 or more	6(2.2)			
Education	Associate	91(33.5)	Current Position	Clerk Supervisor Manager Director or Higher	156(57.4) 60(22.1) 39(14.3) 17(6.3)
	Bachelors Masters or Higher	132(48.5) 44(16.2) 5(1.8)			
	Others				
Work Experience	1-3 years	132(48.5)	The Total		272(%)
	4~6 years	63(23.2)			
	7~9 years	41(15.1)			
	Over 10 years	36(13.2)			
The Total		272(%)	The Total		272(%)

b) Validity and Reliability

As indicated in Table 2, Cronbach's alpha of each construct in the model ranges between 0.710 and 0.871 and fulfills the cut-off point at  $\alpha \geq 0.60$  (Lee, 2006). As construct reliability ranges between 0.723 and 0.889, internal consistency is supported (Kim, 2007). Average Variance Extracted (AVE) estimate ranging between 0.500 and 0.728 supports convergent validity (Farrell and Rudd, 2009).

The standardized factor loading of all measures was moderate ranging between 0.534 and 0.902 after

some items that are less than 0.5 were excluded. The updated items explains the underlying construct by fulfilling the cut-off point of 0.5 and more adequately explains construct validity (Kim 2007). The excluded items were one item in causality, two items in attitude toward contradictions, three items in perception of change, one item in locus of attention, and two items in organizational goal commitment.

Table 2: Confirmatory Factor Analysis and Discriminant Validity

Factor	Item	Estimate	Standard Coefficient	T-value	P-value	Cronbach's $\alpha$	CCR	AVE
Causality	The relation of everything	1.000	0.849			0.864	0.830	0.569
	Integration of all	0.848	0.867	17.114	***			
	Causal relationship of all	0.776	0.714	12.986	***			
	Possibility of alterations in other elements from a single change in one element	0.794	0.726	13.302	***			
	Existence of unknown consequences from a phenomenon	0.518	0.534	9.065	***			
Attitude toward Contradiction	Desirability of middle ground than extremes	1.000	0.639			0.760	0.746	0.524
	Search for ways to compromise and embrace everyone's opinions at conflict	0.848	0.557	7.462	***			

	Importance of compromise than conflict with other's opinions	1.256	0.726	9.037	***			
	Desirability in harmony rather than in discord	1.075	0.753	9.205				
Perception of Change	Predictability of change in directions of phenomenon (r).	1.000	0.582			0.710	0.723	0.500
	Current situations can change at any time	0.995	0.799	9.483	***			
	Predictability of future events based on present situations (r).	1.216	0.644	7.087	***			
Locus of Attention	Value on a whole rather than apart to understand a phenomenon.	1.000	0.872			0.871	0.861	0.561
	Attention to the whole than its parts.	1.083	0.902	18.483	***			
	Value on the whole thing than the sum of its parts.	1.033	0.709	13.321	***			
	Attention to the whole context rather than the details.	0.818	0.660	12.035	***			
	Consideration of the whole picture to understand the parts	0.683	0.543	9.391	***			
Organizational Goal Commitment	Hardness to take organizational goal seriously (r)	1.000	0.777			0.755	0.733	0.501
	Commitment to pursuing organizational goal	0.849	0.650	11.550	***			
	Easiness to abandon this goal (r)	0.850	0.681	12.215	***			
Objectives	Clarification of objectives before choosing	1.000	0.848			0.834	0.889	0.728
	Awareness of job objectives in a decision situation	1.002	0.847	15.808	***			
	Engagement in systematic reflection of what I wish to achieve in the work	0.840	0.770	12.440	***			
Information	Information seeking to improve my decision making	1.000	0.699			0.775	0.793	0.562
	Systematic collection of decision-relevant information	1.141	0.791	11.125	***			
	Double check of information sources to be sure to have the right	1.132	0.740	10.546	***			



	facts before making decisions							
Alternatives	Good at identifying opportunities	1.000	0.668			0.842	0.758	0.512
	Systematic use of job objectives to create alternatives	1.011	0.711	12.253	***			
	Good at finding ways to achieve my job objectives.	1.084	0.771	10.806	***			
Decision Radar	Thorough thinking about when I make which decision	1.000	0.871			0.871	0.856	0.600
	Consideration of future events in my current decisions in the hotel	0.832	0.759	14.657	***			
	Awareness of my thinking process in a decision situation	0.756	0.799	13.034	***			
	Thorough consideration of how best to carry out a decision	0.721	0.624	11.272	***			
fit indices	$\chi^2$ (df:450)=1171.202, p=0.000, CMIN/df= 2.603, GFI= 0.825, AGFI=0.744, RMR=0.077, NFI=0.793, CFI= 0.859, RMSEA=0.077, ***: 0.000 (r):reversed score, CCR: Composite Construct Reliability, AVE: Average Variance Extracted							

c) *Confirmatory Factor Analysis*

Confirmatory Factor Analysis (CFA) was conducted to further examine the construct validity. CFA was applied to all items and chi-square of 1171.202 with the degree of freedom (df) of 450, and p-value of 0.000 (p<0.001). Goodness of fit was supported with the value of chi-square/df <3. For the threshold criteria of the model fit, Goodness-of-fit index (GFI) is desirable at ≥0.90. Adjusted Goodness of Fit Index (AGFI) is desirable at ≥0.80, Root Mean Square Residual (RMR) is desirable at ≤0.05, Normed Fit Index (NFI) is desirable at ≥0.90, Comparative Fit Index (CFI) is desirable at ≥0.90 and permissible at ≥0.80. Chi-square is desirable at >0.05, and Root Mean Square Error of Approximation (RMSEA) is very desirable at ≤ 0.05 and moderately desirable at <0.08.

In Table 2, actual fit indices values are NFI (0.793), AGFI (0.744), RMR (0.077), GFI (0.825), CFI

(0.859), and RMSEA (0.077). Goodness of fit is inversely related to sample size and the number of variables in the model (Hu and Bentler (1999). Therefore, the small sample size with a large number of variables in the study can influence the results. Also, strictly adhering to recommended cut-off values can lead to the instances of incorrect rejection of an acceptable model (Marsh, Haw, and Wen, 2004; Hooper et al. 2008). It was concluded that the suggested study model is marginally acceptable as NFI (0.793) and AGFI (0.744) are at the border line of the cut-off value.

d) *Correlation Matrix*

Correlation coefficients range between 0.194 and 0.749 as shown in Table 3 and satisfies discriminant validity (Kim, 2007).

Table 3: Estimated latent factor correlations

Variable	Means	S.D.	1	2	3	4	5	6	7	8	9
Causality Attitude	5.781	0.834	1								
Change Locus of	5.865	0.807	0.375**	1							
Attention Org. Goal	2.149	1.028	0.541**	0.355**	1						
Comm.	5.389	1.100	0.328**	0.418**	0.445**	1					
Objectives	5.456	0.849	0.360**	0.303**	0.282**	0.431**	1				
Information	5.625	0.707	0.330**	0.240**	0.184**	0.330**	0.621**	1			
Alternatives	5.473	0.816	0.351**	0.267**	0.194**	0.215**	0.512**	0.537**	1		
Decision Radar	5.327	0.842	0.341**	0.219***	0.227**	0.367**	0.673**	0.616**	0.636*	1	
	5.639	0.799	0.378**	0.337***	0.280**	0.303**	0.749**	0.586**	0.581*	0.535*	1

\*\*\* significant at p<0.001, \*\* significant at p<0.01, \* significant at p<0.05, S.D.: Standard Deviation

e) *Hypotheses Testing*

For the results of overall measurement model testing, Table 4 shows the strength of the relationships amongst the constructs and overall goodness of model fit indices. The adequacy of the structural equation models was evaluated on the criteria of overall fit with the data. The results of hypotheses testing are described next.

i. *Holistic Thinking and Organizational Goal Commitment (H1-1 through H1-4)*

H1-1, explaining the relationship between causality and organizational goal commitment, was supported. The test result presents a path coefficient of 2.862 for the impact of the hotel employees' causality on organizational goal commitment ( $t > 1.96, p < 0.001$ ). H1-2, explaining the relationship between attitude towards contradiction and organizational goal commitment, was not supported. H1-3, explaining the relationship between the perception of change and organizational goal commitment, was supported. The test result presents a path coefficient of 3.665 for the impact of the hotel employees' causality on organizational goal commitment ( $t > 1.96, p < 0.001$ ). H1-4, explaining the relationship between the locus of attention and organizational goal commitment, was supported. The test result presents a path coefficient of 1.650 for the impact of the hotel employees' locus of attention on organizational goal commitment ( $t > 1.96, p < 0.001$ ). Overall, H1, the impact of holistic thinking on organizational goal commitment is partially supported.

ii. *Holistic Thinking and Proactive Decision-Making (H2-1 through H2-16)*

H2-1, explaining the impact of the hotel employees' causality on objectives, was not supported. H2-2, explaining the impact of the hotel employees' causality on their information, was not supported. H2-3, explaining the impact of the hotel employees' causality on their alternatives, was not supported. H2-4, explaining the impact of the hotel employees' causality on decision radar, was not supported.

H2-5, explaining the impact of the hotel employees' attitude toward contradiction on objective, was not supported. H2-6, explaining the impact of the hotel employees' attitude toward contradiction on

information, was not supported. H2-7, explaining the impact of the hotel employees' attitude toward contradiction on alternatives, was not supported. H2-8, explaining the impact of the hotel employees' attitude toward contradiction on decision radar, was not supported.

H2-9, explaining the impact of the hotel employees' perception of change on their objectives, was not supported. H2-10, explaining the impact of the hotel employees' perception of change on their information, was not supported. H2-11, explaining the impact of the hotel employees' perception of change on their alternatives, was not supported. H2-12, explaining the impact of the hotel employees' perception of change on their decision radar, was not supported.

H2-13, explaining the impact of the hotel employees' locus of attention on their objective, was not supported. H2-14, explaining the impact of the hotel employees' locus of attention on their information, was not supported. H2-15, explaining the impact of the hotel employees' locus of attention on their alternatives, was not supported. H2-16, explaining the impact of the hotel employees' locus of attention on their decision radar, was not supported. Overall, H2 for the relationship between holistic thinking and proactive decision-making were not supported.

iii. *Organizational Goal Commitment and Proactive Decision-Making (H3-1 through H3-4)*

H3-1, explaining the relationship between organizational goal commitment and objectives, was not supported. H3-2, explaining the relationship between organizational goal commitment and information, was supported. The result showed a path coefficient of 0.507 for the impact of the hotel employees' causality on organizational goal commitment. H3-3, explaining the relationship between organizational goal commitment and alternatives, was not supported. H3-4, explaining the relationship between organizational goal commitment and decision radar, was supported. The result showed a path coefficient of 1.850 for the impact of the hotel employees' causality on organizational goal commitment ( $t > 1.96, p < 0.001$ ). Therefore, H3, the impact of organizational goal commitment on proactive decision-making was partially supported.

Table 4: Direct Effects and Fit Indices of the Model

Hypotheses	Path	S.C.	S.E.	T-value	P-value	Result
H1-1	Causality -> Organizational Goal Commitment	2.862	0.959	2.428	*	supported
H1-2	Attitude toward Contradiction-> Organizational Goal Commitment	0.657	0.509	1.506	0.132	rejected
H1-3	Perception of Change-> Organizational Goal Commitment	3.665	2.503	2.179	*	supported

H1-4	Locus of Attention-> Organizational Goal Commitment	1.650	0.478	2.544	*	supported
H2-1	Causality -> Objectives	1.653	0.716	1.642	0.101	rejected
H2-2	Causality -> Information	1.325	0.556	1.675	0.094	rejected
H2-3	Causality -> Alternatives	3.550	1.529	1.672	0.095	rejected
H2-4	Causality -> Decision Radar	-3.293	2.401	-1.267	0.205	rejected
H2-5	Attitude toward Contradiction-> Objectives	0.321	0.321	1.023	0.306	rejected
H2-6	Attitude toward Contradiction-> Information	0.313	0.249	1.266	0.205	rejected
H2-7	Attitude toward Contradiction-> Alternatives	0.719	0.681	1.093	0.274	rejected
H2-8	Attitude toward Contradiction-> Decision Radar	-0.599	0.964	-0.825	0.408	rejected
H2-9	Perception of Change-> Objectives	2.129	1.441	1.577	0.115	rejected
H2-10	Perception of Change-> Information	1.530	1.115	1.448	0.148	rejected
H2-11	Perception of Change-> Alternatives	4.651	3.084	1.630	0.102	rejected
H2-12	Perception of Change-> Decision Radar	-4.289	4.762	-1.249	0.212	rejected
H2-13	Locus of Attention-> Objectives	0.867	0.367	1.519	0.129	rejected
H2-14	Locus of Attention-> Information	0.333	0.284	0.747	0.455	rejected
H2-15	Locus of Attention->Alternatives	1.905	0.783	1.587	0.113	rejected
H2-16	Locus of Attention-> Decision Radar	-1.999	1.237	-1.352	0.176	rejected
H3-1	Organizational Goal Commitment -> Objectives	0.367	0.232	1.384	0.166	rejected
H3-2	Organizational Goal Commitment -> Information	0.507	0.182	2.408	*	supported
H3-3	Organizational Goal Commitment ->Alternatives	0.112	0.487	0.204	0.838	rejected
H3-4	Organizational Goal Commitment -> Decision Radar	1.850	0.852	2.466	*	supported
fit indices	$\chi^2$ (df = 456) = 1205.641 (p = 0.000), CMIN/df = 2.644, GFI = 0.791, AGFI = 0.743, RMR = 0.077, NFI = 0.786, TLI = 0.830, CFI = 0.854, RMSEA = 0.078					

Note: \*\*\* significant at <0.001, \*\* significant at <0.01, \* significant at <0.05, S.C.: standardized coefficient

iv. Organizational Goal Commitment as Linking Mechanism (H4-1 through H4-16) between the lower level component variables of holistic thinking and those of proactive decision-making.

Table 5 depicts the mediating effect of organizational goal commitment for the relationship

Table 5: Mediating Effect of Organizational Goal Commitment

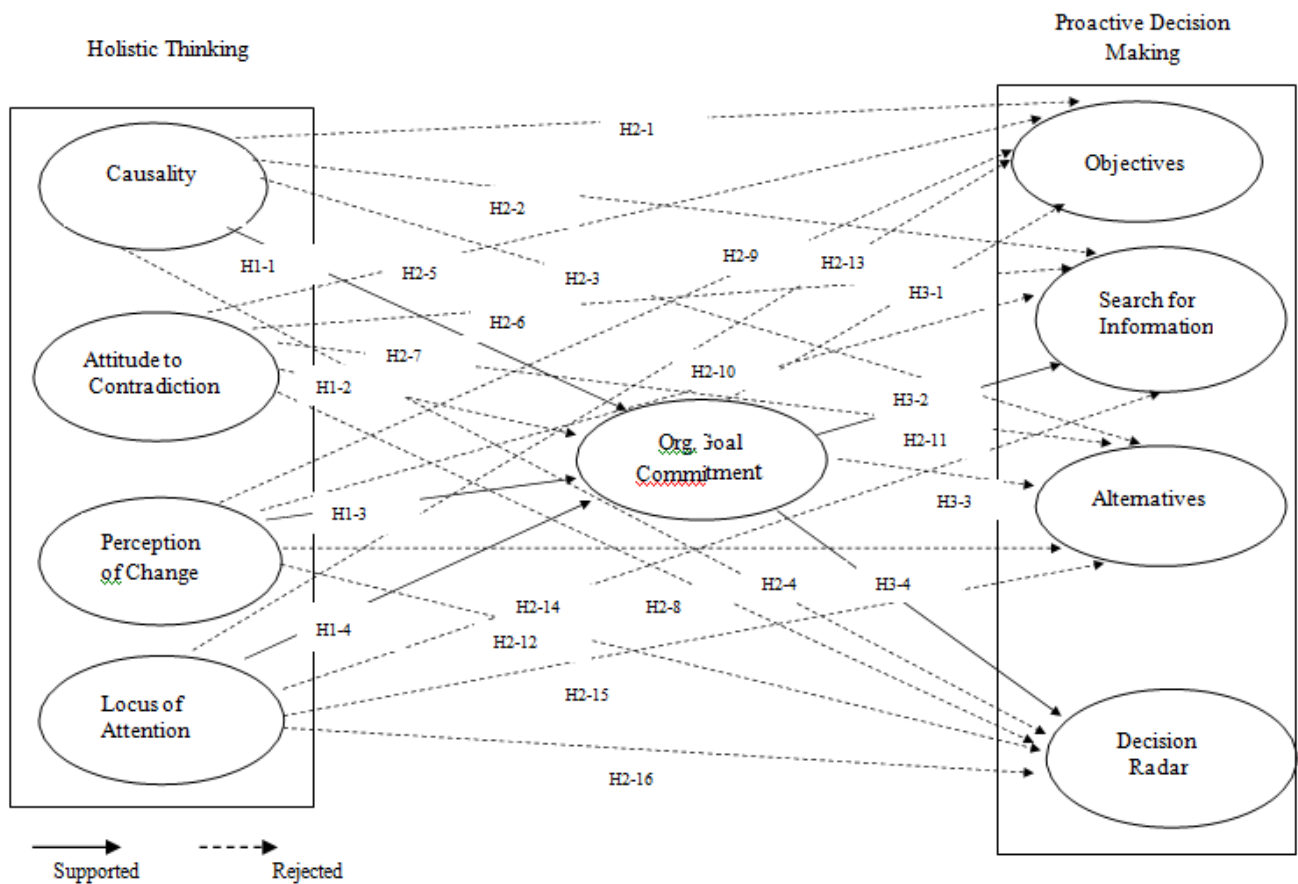
Hypothesis	direct (x->y)	indirect	Result
H4-1: Causality-> Goal Commitment-> Objective	1.653	1.051**	Full mediation
H4-2: Causality->Goal Commitment-> Information	1.325	1.450**	Full mediation
H4-3: Causality->Goal Commitment-> Alternative	3.550	0.321	No mediation
H4-4: Causality->Goal Commitment-> Decision Radar	-3.293	5.297**	Full mediation

H4-5: Attitude toward Contradiction->Goal Commitment-> Objective	0.321	0.241	No mediation
H4-6: Attitude toward Contradiction ->Goal Commitment-> Information	0.313	0.333	No mediation
H4-7: Attitude toward Contradiction ->Goal Commitment-> Alternative	0.719	0.074	No mediation
H4-8: Attitude toward Contradiction ->Goal Commitment-> Decision Radar	-0.599	2.215	No mediation
H4-9: Perception of Change->Goal Commitment-> Objective	2.129	1.346*	Full mediation
H4-10: Perception of Change ->Goal Commitment-> Information	1.530	1.857**	Full mediation
H4-11: Perception of Change ->Goal Commitment-> Alternative	4.651	0.411	No mediation
H4-12: Perception of Change ->Goal Commitment-> Decision Radar	-4.289	6.782*	Full mediation
H4-13: Locus of Attention->Goal Commitment-> Objective	0.867	0.606*	Full mediation
H4-14: Locus of Attention ->Goal Commitment-> Information	0.333	0.836**	Full mediation
H4-15: Locus of Attention ->Goal Commitment-> Alternative	1.905	0.185	No Mediation
H4-16: Locus of Attention ->Goal Commitment-> Decision Radar	-1.999	3.054**	Full mediation

Note: The significance of indirect effect was verified through bootstrapping, significant at \*\*\*  $p < 0.001$  , \*\*  $p < 0.01$  \* $p < 0.05$

Table 5 shows that the mediating effects of organizational goal commitment on the relationship between causality and objectives, information, and decision radar were supported, whereas the effect of organizational goal commitment on the relationship between causality and alternatives was rejected. Thus, H4-1, 4-2, and 4-4 were supported while H4-3 was rejected.

The mediating impact of organizational goal commitment on the relationship between attitude towards contradiction and proactive decision-making was not supported. Thus, H4-5, 4-6, 4-7, and 4-8 were rejected. The mediating role of organizational goal commitment on the relationship between perception of change and proactive decision-making was supported except for the relationship with alternatives. This means H4-9, 4-10, and 4-12 were supported while H4-11 was rejected. The impact of perception of change on objectives, information, and decision radar was mediated through organizational goal commitment. The mediating impacts of organizational goal commitment on the relationship between locus of attention and proactive decision making were supported except for the relationship with alternatives. Thus, H4-13, 4-14, and 4-16 were supported while H4-15 was rejected. The summary of all hypotheses testing is graphically shown in Figure 2.



Fit Indices:  $\chi^2(df=456)=1205.641(p=0.000)$ ,  $CMIN/df=2.644$ ,  $GFI=0.791$ ,  $AGFI=0.743$ ,  $RMR=0.077$ ,  $NFI=0.786$ ,  $TLI=0.830$ ,  $CFI=0.854$ ,  $RMSEA=0.078$

Figure 2: Final Model

## V. DISCUSSION

This study examines how organizational goal commitment explains the relationship between holistic thinking and proactive decision-making within the context of hotel employees. As the hypotheses testing of H1-1 through H1-4 indicates, the employees' goal commitment is positively related to their holistic thinking in terms of causality, perception of change, and locus of attention. The result is in line with Jaaron and Backhaus (2014)'s study on organizational performance. Aspects of holistic thinking such as understanding the given situation, the intention and acceptance of change, and looking at the whole picture are positively related to organizational goal commitment. However, their attitude towards contradiction is not significantly related. One possible explanation is that hotel employees cannot always choose a middle ground solution when faced with contradictory problems, often due to customers' expectations that all their demands be met.

In regards to causality in hotel employees' holistic thinking, employees are more likely to be concerned with the long term outcomes for the organization, not immediate individual conflicts. If hotel employees have the perception of change, they are

more likely to anticipate and predict potential variables in a situation and make efforts to create a desirable end result that is aligned with organizational goals. Furthermore, if hotel employees utilize a holistic thinking style, they are more likely to understand what the organization is trying to achieve and more actively participate in their role.

Overall, H2 shows that a significant relationship between holistic thinking and proactive decision-making was not supported. All of H2-1 through H2-16 were rejected. There is little research reported on the relationship between holistic thinking and proactive decision-making, however, Wu, Deng, and Li (2018) reported that proactive behavior would initiate actions that aim to master the environment.

This study examined whether holistic thinking could explain the variance of proactive decision-making. Any direct relationship that exists between the two processes is not clearly supported, and there is little research reported. Traditionally, the culture surrounding hotel employee structure has been largely hierarchical and rule-oriented. Given this, hotel employees may not generally be open to innovative problem-solving and would require training in holistic and proactive thinking.



H3 shows that the test results of the relationship between organizational goal commitment and proactive decision-making are mixed. While information and the use of decision radar are positively related, the objectives and the alternatives are not. Ohly and Fritz (2007) examined the correlation between work motivation and proactive behavior. For example, their study found that intrinsic work motivation was not significantly related to proactive behavior, whereas self-efficacy was significantly related. The relationship between organizational goal commitment and proactive decision-making seems inconclusive, although previous studies used different domains and factors. Such results merit further research on the relationship between organizational goal commitment and proactive decision-making.

H4 examined the mediating role of organizational goal commitment between holistic thinking and proactivity in decision-making. It sheds light on understanding H2 and H3: a direct relationship between holistic thinking and proactive decision-making was not supported in hypotheses 2 testing. Through hypotheses 3 testing, it was found that a relationship between goal commitment and proactive decision-making was partially supported. A plausible explanation of the hypothesis not being accepted could be that the employees might not have sufficient time to consider various alternative solutions due to time constraints or lack of training.

The effects of causality on objectives, information, and the use of decision radar as mediated by goal commitment were supported, whereas the mediating effects of causality on alternatives through goal commitment were not supported. As stated earlier, the impact of attitude towards contradiction on proactive decision-making was not supported. Additionally, the mediating effect of attitude towards contradiction on proactive decision-making was not supported.

The employees with causality are likely to consider the importance of interdepartmental relationships and may make their final decision through collaboration. A rejection of the hypothesis on the alternatives and the attitude towards contradiction might be interpreted as a non-consideration of such collaboration.

As stated earlier, the impact of perception of change on proactive decision-making was not supported. The mediating effects of perception of change on objectives, information, and the use of decision radar except the alternatives through organizational goal commitment were supported. However, the alternatives might be processed in other stages, such as the use of decision radar due to other reasons. When hotel employees with a perception of change face unexpected situations, they might address the problem proactively with their organizational goals at the forefront of their decision-making.

As shown in hypotheses testing, the locus of attention does not make an impact on proactive decision-making. The mediating impacts of the locus of attention on objectives, information, and the use of decision radar except the alternatives through organizational goal commitment were also supported. While the locus of attention might affect hotel employees' ability to make proactive decisions through the attitudinal variable, the employees may not have confidence in making proactive decisions based only on the alternatives. On the other hand, the alternatives may also work with other proactive decision-making variables and may reduce its impact. Such interpretation would merit further research.

Attitudinal variables need to be mediated in order to make holistic thinking effective for proactive decision-making in the hotel industry. The other mediating variables can be further investigated to understand whether they enhance the relationship between holistic thinking and proactive decision-making. The employees' locus of attention can contribute to proactive decision-making through attitudinal change. Alternatives may not be applicable to all of their decision-making, or it may be applicable when combined with other factors. This is still uncertain and it would be worth further examining how other mediating factors might generate an impact between holistic thinking and proactive decision-making.

Pedersen (2015) reported the impact of goal commitment on task performance among teachers. Xiaotian & Jingyu (2017) reported that holistic thinking could influence decision-making that was independent of work experience in the air traffic control domain. They further emphasized that the thinking style could be employed for the selection and training of decision-makers. In addition, Cerasoli and Ford (2014) found a mediating role of goal orientation on the relationship between motivation and performance behavior with a student group. This study highlights that the hotel employees' organizational goal commitment works mostly as a mediator in explaining the relationship between holistic thinking and proactive decision-making, and that holistic thinking could positively impact proactive decision-making when goal commitment is involved.

## VI. CONCLUSION

The purpose of this study was to provide the empirical evidence of the significance of holistic thinking and goal commitment on improving proactive decision-making in the context of upscale hotel employees. This study found limited significance. The first research goal was accomplished as causality, perception of change, and locus of attention were found to be significant antecedents of organizational goal commitment. The second research goal was fulfilled as it was found that

holistic thinking is not a direct antecedent of proactive decision-making. The third research goal was met as it was found that organizational goal commitment significantly influences the search for information and decision radar. The final research goal was accomplished as follows: Although holistic thinking did not make a significant impact on proactive decision-making, the concepts of causality, perception of change, and locus of attention made a significant impact on objectives, information, and use of decision radar when organizational goal commitment intervened in the relationship. This indicates a significant mediating effect of organizational goal commitment on the relationship. However, organizational goal commitment did not mediate the impact of attitude towards contradiction on proactive decision-making.

This study presents the following managerial and practical implications: When hiring and training employees, hotel managers should examine the prospective candidate's decision-making characteristics as a holistic thinker as well as their organizational goal commitment. For example, the human resources department of a hotel might utilize example scenarios and case studies during an interview to gauge an applicant's propensity for holistic thinking. Holistic thinking skills can also be learned on the job to encourage overall organizational improvement (Cohen, Freeman, and Thompson, 1998; Snyder and Snyder 2008).

In addition, the hotel management should make their employees aware of the organizational goals of the hotel. For larger organizations, it can prove difficult to streamline goals across all departments and monitor each employees' individual decision-making processes. It may be helpful to introduce employee incentives to encourage thinking towards meeting organizational goals.

The limitations of this study are as follows: For example, there is a possibility that survey respondents could have answered the questions in accordance with social norms. Additionally, their answers for previous questions may have influenced their responses for subsequent questions in the survey. It would be interesting to examine whether proactive decision-making resulted in enhancing the satisfaction of hotel guests. Therefore, future research would examine the predictability and effectiveness of decision-making and thinking style on customer satisfaction.

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