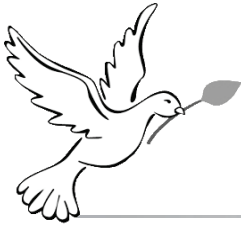


# Leadership Competencies in Turbulent Environment\*



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## Abstract

Leadership competencies, historically, could be ineffective when coping with a turbulent environment. The prime objective in this study was then to empirically propose 21<sup>st</sup> century leadership competencies. VUCA (volatility, uncertainty, complexity and ambiguity) concepts, crisis management and leadership competency theories, were used to frame the conceptual framework. The unit of analysis in this studying was Thai-listed companies across eight industries. To quantitative analysis, with 138 respondents, based on analysis of variance (ANOVA), it was shown that the types of industry were insignificant toward the level of VUCA, maturity of agile leadership and ways of managing crises. Regarding regression model, important managerial competencies for the 21<sup>st</sup> century are increased ability to determine both short and long term vision, capable to engage stakeholders, people-strategy and understanding new paradigm of management tools. Leaders who only understand day-to-day problem solving are not enough. Moreover, the most vital functional competencies for a future leader concluded from qualitative analysis is communication with trust as an initial response. Apart from communication skills, predictive, cognitive, digital and good networking skills are all necessary to fix the turbulent environment. The author then proposed a training roadmap for potential leaders.

**Keywords:** Leadership Competency; Turbulent Environment; Agile Leader; VUCA

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## Introduction

Operating a business today confronts a substantial volatility, uncertainty, complexity and ambiguity (VUCA) environment. The same input will not assure the same output. Inevitably, the linear character of the SIPOC model (supplier, input, process, output and customer) will soon be ineffective. Past and present successes do not always translate into future achievement (Raghuramapatruni & Shanmukha, 2017). Such a situation is about the VUCA environment.

Back then, Brexit, which is about the situation of the United Kingdom leaving the EU (European Union) due to the effect of a globalizing world that leads the financial and stock market price around the world, which even in Asia dramatically declined. Such phenomena originated from the high speed of change, volatility, as well as an unpredictable pattern (Oliver & Anshuman, 2016: 24). Furthermore, apart from the speed of change, organizations most often lack the ability to know everything due to uncertainty. Sophisticated statistical tools make forecasting extremely difficult and decision-making challenging. Organizations today interact with many dependency entities with an interconnected and networked environment resulting from globalization (Nye & Donahue, 2000) that is called the complexity of the environment. Ambiguity is persistent when unclear situations occur and need a great skill for interpretation.

Critical success factors (CSFs) for handling such a VUCA environment do not occur in isolation. In other words, there are many factors that interactively deal with the turbulent environment. Based on contingency theory, even all internal factors are interdependent, the most vital factor is the “leader” (Selznick, 1948). Unfortunately, previous leadership competency is not enough to cope with such a crisis situation. Leadership competency has been developed, and it is a paradigm shifted to the era of an “Agile Leader”. Leadership agility accounts for leader competency that quickly copes with the changing circumstances, and to effectively manipulate complexity (Joiner & Josephs, 2007) with high adaptability. Hopefully, such an agile character could be one of the CSFs for a VUCA environment.

First and foremost, the author would need to analyze the significant different level of industrial sectors regarding the issue of managing crises, level of VUCA intensity and maturity of agile leadership via the analysis of variance (ANOVA) technique? Secondly, the author was employed quantitative analysis with regression model to gather 21<sup>st</sup> leader competencies for the future while crises with the concepts of maturities of agile leaders. Even during with turbulent environment does not mean only the competencies to deal with crises, to simplify, the author selected managing crisis since it is measurable as well as the effect of organizational performance (SakaRahmonOlawale, 2014: 80). Thirdly, some functional competencies toward the qualitative analysis will be proposed.

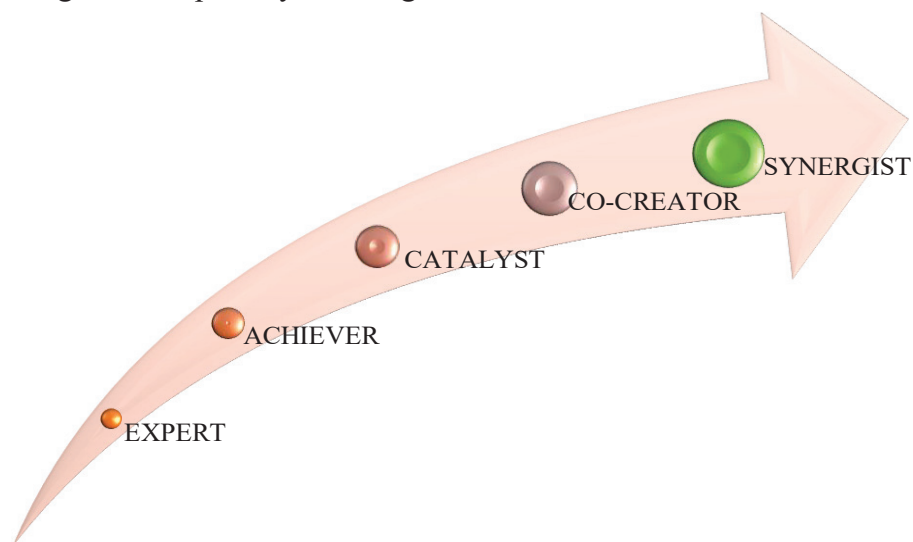
Hopefully, this research will generate a positive impact on both organizations and academics. For the former, organizations will be able to survive due to a well-developed agile leader given appropriate competency. For the latter, the convergence between sophisticated statistical tools thru multiple regression and the school of risk and crisis will be found. Ultimately, a dynamic of mixed-method in social science research will be displayed.

## Theoretical Construction and Proposed Framework

### Maturity of Agile Leader Framework

Leadership agility originates from organizational agility. Organizational agility is about the ability to perform effective actions under changing conditions amid complexes. Leadership competencies that serve such circumstances are highly adaptive in manner and offer flexibility. In addition, the meaning of agility itself is defined as an intentional, proactive stance. Generally, leadership agility is developed from both outside-in and inside-out. Outside-in means the skills needed for agile leadership in a complexity and rapidly change environment, and, of course, inside-out could be determined from leadership emotion and personal experience. Apart from finding the causality between the maturity of the agile leader and crisis management, the qualitative findings will aim to develop 21<sup>st</sup> leadership competency.

To assess the maturity of the agile leader, Joiner and Josephs (2007) proposed five levels of agile leadership: expert, achiever, catalyst, co-creator and synergist, which were the focus of managerial competency, as in figure 1.



**Figure1:** Maturity of Agile Leader Framework

**Source:** (Joiner and Josephs, 2007)

- Expert Level: Leaders who are located in this level most often deal with day to day problem solving. They might prefer not to develop good relationships with stakeholders. In addition, they believe in their perspective. One obvious improvement is about the ability to see organizations as a complete picture.
- Achiever Level: They are highly competent in achieving both short and long term organizational goals. They originate the alignment among organizational vision, mission and strategies. Leaders in this level initially agree that success incorporates good persuasive conversations with stakeholders. Additionally, they are also concerned with the effect of the external environment. Finally, to survive within a turbulent environment, they pay attention to people-value.
- Catalyst Level: A leader in this level creates a new organizational environment that consequently has a positive effect that will direct the impact to the stakeholder who determines the new era direction. They still maintain an ability at the same level as the achiever level; yet, some cultures prefer to generate, for instance, team engagement and sustainability, as well as people strategies.
- Co-creator level: As a co-creator, leaders significantly generate a shared-purpose. They gather the individuals (micro perspective) needed and consolidate in a company

direction. They believe that to survive in a turbulent environment, organizations cannot ignore stakeholders and the environment. Collaboration and commitment from all parts of the organization would enable organizational enhancement. Co-creators are concerned with macro and micro perspectives.

- Synergist level: With the highest maturity of an agile leader, they mostly respond to unexpected situations for organizations. They are always cheerful and have good emotions. They maintain a deep commitment. One important ability of a synergist is to manage the distinctive people and characters to form a harmonized environment.

### Managing Crisis

The World Economic Forum (WEF, 2018) generates a global risk report that annually gathers information thru a survey from risk experts around the world. Three risks are prioritized: disruptive technology, environmental danger and political tension. In the next decade, a turbulent environment may somewhat drive from such risks. WEF also states that the format of the risk in the future will be hard to mitigate as the risks will be interconnected, across functions, boundless and integration rather than those of historical risks.

As already mentioned, in the VUCA environment, leaders today interact with crisis and risk constantly. Risk has multi-faced definitions, while different theorists defined it distinctively (Spikin & Cienfuegos, 2013). Generally, risk accounts for uncertainty events that deviate from organizational goals, mission and vision. Risk is a different problem. For the former, it could possibly occur but, for the latter, it still exists. Risk also leads to the failure of organizational strategies, while problems or incidents are about day-to-day operation (Sae-Lim & Pathranarakul, 2018).

		Consequence				
		Insignificant	Minor	Moderate	Major	Severe
Likelihood	Almost certain	Medium	High	High	Extreme	Extreme
	Likely	Medium	Medium	High	Extreme	Extreme
	Possible	Low	Medium	Medium	High	Extreme
	Unlikely	Low	Low	Medium	High	High
	Rare	Low	Low	Low	Medium	High

**Figure 2: Risk Matrix**

Risk mostly quantifies from the chance of the occurrence, likelihood, and the impact of it, consequence, and put it in a risk matrix (figure 2). It is not possible to measure the risk severity from the product of the risk likelihood and consequences, but we need to take it for granted even in the rare likelihood, but major and severe impact (COSO, 2004; Sae-Lim, 2018).

The OECD (Organization for European Economic Co-operation) defines the new nature of crisis as “unexpectedly large scale, unusual combination and unprecedented, spread with boundless, increased vulnerabilities of modern societies.” In other words, a crisis is one from of risk in relation to a highly negative consequence located in the red zone (figure 2).

Historically, the likelihood of the crisis originated from a rare or unlikely situation; on the contrary, as a global risk in 2018, its chance of occurring is higher than in the past.

The maturity of crisis handling in different organizations and industries will vary. They depend on the level of preparedness and external environment. Naturally, under a turbulent environment, industries will reach high maturity when managing crises. However, apart from its environment, this research challenges to what extent the relationship between leader competency and crisis handling is determined by the five agile leader competencies.

Importantly, managing crises has standard phases: preparedness and response (MEJRI & DE, 2013). For preparedness, organizations conduct risk assessments, develop early warning systems, maintain compulsory equipment, training and exercises and determine mandates. Additionally, in the response phase, organizations should have a detective system while in crises, generating crises monitoring system, assigning coordinates and key persons, launching crises committee and crises team, standard operating procedures (SOPs) and crisis communication dialogues.

### Leader Competencies

Most people interpret the definitions of competency in several ways. Yet, some people understand that competency accounts for the qualification. Actually, there are some distinctive differences between competency and qualification. To put it simply, for employment, the qualification means the educational background or the compulsory requirement while the competency includes knowledge, skills, behavior and so forth. Bloom's taxonomy, the well-known educational leadership description, states that competencies derive from skill (psychomotor), knowledge (cognitive) and attitude (affective).

Both practices and theorists try to measure competencies. The Society for Human Resource Management (SHRM) proposed that leadership talent for the 21<sup>st</sup> century workplace framework consisted of leading in business, leading people and character strengths & virtues. The OECD, secondly, proposed a competency framework that is composed of delivery-related, interpersonal and strategic dimensions, as in figure 3. Both of them indicate that leadership competencies should be combined with managerial and functional competencies.



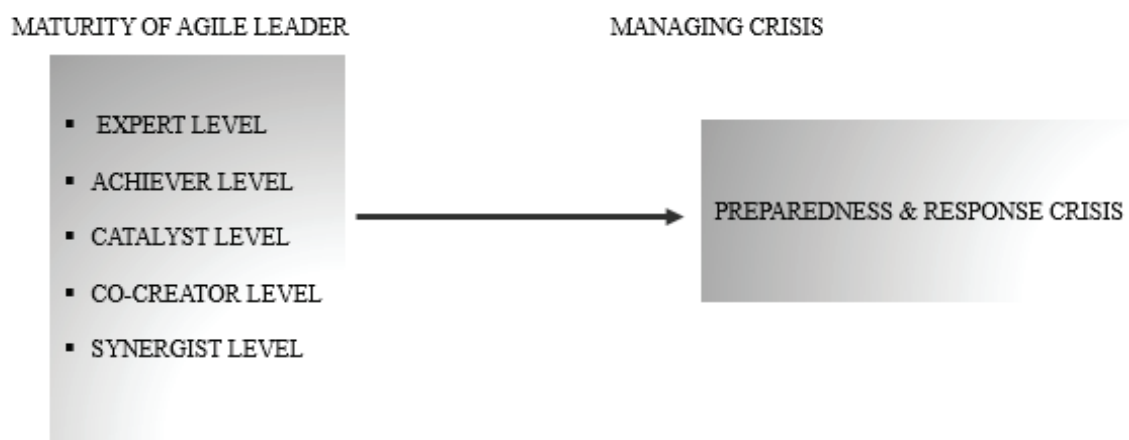
Figure 3: OECD Leadership Competency

There are many theories relating to leadership competencies, such as ancient, classical, trait, contingency, situation and so forth. Unfortunately, such competencies only measure leadership under normal situations, while the main objective in this paper is to propose and develop leadership competencies in a turbulent environment that is still in the process of development and lacking any prior supporting publications.

### Proposed Quantitative Conceptual Frameworks

As the second objective, the author was interested in the relationship between the maturity of the agile leader and crisis management. The role of the quantitative methodology in this work empirically studied the relationships between managerial competencies thru the agile leadership framework and crisis management.

A conceptual framework relating to the second objective is displayed below.



**Figure 4:** Conceptual Framework

For the quantitative analysis, the first hypothesis is tested via ANOVA and the second objective is via multiple regression models as are stated below.

H1: There are many distinctive levels of VUCA, agile level and managing crises across industries?

H2: The maturity of the agile leader level has a positive relationship to the method of crisis handling.

### Research Methodology

Most social science research focuses on a mixed-methods, while the quality of its method is about the dynamic of the insertion between the quantitative and quality methodology. Philosophically, the quantitative method itself thru empirical analysis is concerned with reliability and validity, while the qualitative method rests too much upon subjectivity. For these things, this work thus selected "follow-up qualitative extensions to core quantitative research projects" (David, 2014) to reduce the research-bias.

#### Core Quantitative Research (Preliminary Phase)

The quantitative roles in this study are about assessing the Thai-listed environment across industries to what extent they interact with the VUCA environment. Moreover, the causality between the maturity of the agile leader and crisis management are synthesized, which is concerned with managerial competencies. Descriptive and inferential statistics were both employed.



### Unit of Analysis and Sampling

As the author empirically educated employee attitudes toward their leader, the unit of analysis in this study accounted for the individual level. The unit of analysis for Thai-listed companies originated thru eight industries: agro and food products, consumer products, finance, industrial, property and construction, resources, services and technology. As not all organizations are faced with crises, the author intentionally selected only the organizations that have faced crises, as well as the high impact of the enterprise risks.

### Model Specification

When assessing and comparing the distinctive levels among the degree of VUCA thru the eight industries, analysis of variance (ANOVA) would be employed to suppose the normal distribution to the mean degree of VUCA thru eight industries ( $H_0: \mu_1 = \mu_2 = \dots = \mu_k$ ,  $H_A: \mu_i \neq \mu_j$ ) for some  $i$  and  $j$ , in which  $\mu$  accounts for the intense degree that the industries were confronted with the VUCA environment.

First and foremost, the objective in this study was fixed by multiple regression with five independent variables (maturity of agile leader) and one dependent variable (crisis management) as in the following equation:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 \dots \dots \dots \text{EQUATION(1)}$$

where  $Y$  = ability to manage crisis,  $\beta_i$  = regression coefficient for  $X_i$

Supposed  $X_i$  = maturity level of agile leader: expert, achiever, catalyst, co-creator and synergist level.

With both the adopted ANOVA and multiple regression, that violated the assumptions when testing the data distribution, autocorrelation of error and multicollinearity were verified.

### Qualitative Methodology with Semi-Structure Interview

After performing the quantitative analysis, the researcher would be able to derive the possible managerial competency given the agile leader framework while the qualitative role is about finding the core functional competencies in the development of 21<sup>st</sup> century leadership in a turbulent environment. Ten experts in the human capital field were selected thru semi-structure interview. Aurini, Heath and Howells (2016) proposed four basic types of interview: conversational, guiding interview, semi-structured interview and fixed-response, and the author selected a semi-structured interview for gathering the leadership competencies framework. Normally, leadership competencies are multifaceted dimensions, while the author focused on leadership in change management (Milan et al, 2008), practical standard from SHRM and competency framework from the OECD.

To define semi-structure interview, Adam (2015) stated that semi-structure interview was a middle method between closed-ended surveys and free form, open-ended sessions. As the author selected 10 experts in HR field across industries, they were all the busiest as open ended sessions were inapplicable. The researcher then prepared functional competencies check-lists to the process of interview. The interview time was about 30-45 minutes with these the following questions.

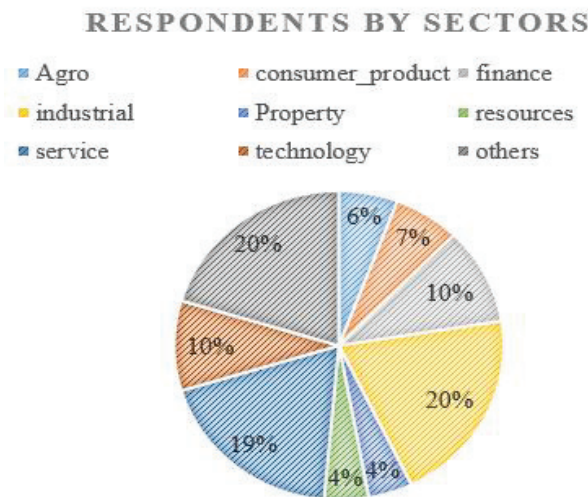
- As today organizations confronted with the crises, what are the most functional competencies we need?
- Why such the proposed functional competencies will be important?

## Results

### Quantitative Findings

#### Descriptive Statistics Results

Based on 138 respondents, the industrial sector was the largest in this study, closely followed by the property sector (figure 5). As table 1 shows, each sector interacted with the VACA environment equally.



**Figure 5:** Respondents by Sectors

**Table 1:** VUCA Level by Sectors

Sectors	VUCA Level
Agro & Food	3.13
Consumer Products	3.22
Finance	3.21
Industrial	3.11
Property & Construction	3.08
Resources & Energy	3.50
Services	3.12
Technology	3.63
Others	3.13

### Inferential Statistics Results

#### 1) Testing Data Assumptions

With the regression analysis, the linearity among the variables were tested. Moreover, the multicollinearity among the independent variables is low due to VIF values less than 10 (VIF ranged from 1 to 3). For the sample size, the author selected organizations by sector, where they had been confronted with crises and assuming 100 staff at each selected company. Based on a statistical error of 0.05 as well as moderate effect size, 138 respondents were qualified (Hair, 2010).

#### 2) Environmental Scanning by Sectors/Types (Hypothesis 1)

With hypothesis 1, are there any distinctive levels among VUCA, agile level and crisis management across industries? For the ANOVA in table 2, it could be possible to



interpret that types of industries are insignificant in the aspects of VUCA, agile level and crisis management across industries. Therefore, compared financial to technology sectors, they are indifferent in terms of confronting VUCA, agile level and crisis management.

**Table 2:** Analysis of Variance (ANOVA) by Sector

Dependent Variables		Sum of Squares	Degrees of Freedom	Mean Square	F	SIG
VUCA	Between	3.714	8	0.464	.684	.705
	Within	87.593	129	0.679		
AGILE	Between	.884	8	.110	.409	.914
	Within	34.86	129	.270		
CRISIS_MGT	Between	5.750	8	.719	.805	.599
	Within	115.117	129	.893		

### 3) Predictive Model Result (Hypothesis 2)

Statistically, are there any correlations between agile level and crisis management (sig<0.05)? This is supported by the second hypothesis. Empirically, based on table 3, it could be found that the achiever, catalyst and co-creator levels are significantly correlated with managing crises (sig<0.05). These independent variables (agile levels) had highly predictive power with an R squared accounting for 77 percent. However, low and high levels of agile (expert and synergist level) were both insignificant when managing crises. Therefore, a refine model after removing insignificant variables was displayed in table 4. Also, the predictive equation was stated in equation2.

**Table 3:** Multiple Regression Results

MODEL	UNSTANDARDIZE COEFFICIENTS	t-test	SIG
Constant	.400	1.104	.272
Expert	-.062	-1.108	.311
Achiever	.269	3.067	0.003*
Catalyst	.197	2.172	0.032*
Co-creator	.467	5.766	0.000*
Synergist	-.053	-.741	.460

\*indicated p value < 0.05

**Table 4:** Refine Model

MODEL	UNSTANDARDIZE COEFFICIENTS	t-test	SIG
Constant	0.057	0.316	0.752
Achiever	0.258	2.985	0.003*
Catalyst	0.210	2.443	0.016*
Co-creator	0.463	5.939	0.000*

\*indicated p value < 0.05

$$Y = 0.057 + 0.258X_2 + 0.210X_3 + .463X_4 \text{ EQUATION (2)}$$

## Qualitative Findings

Based on the quantitative result, it could be shown that agile leadership was significantly related to the maturity of the crisis management. Managerial competencies through the agile leadership framework resulted in achiever, catalyst and co-creator levels having a

positive relationship between the management of crises in a Thai-listed organizations context. For the qualitative analysis, 10 experts suggested that the following functional competencies were indispensable to a turbulent environment.

- **Communication Skill:** All 10 experts mentioned the high level of good communication skills for future leaders. Communication is not only a matter while experiencing turbulence, but it is also compulsory for business as usual. While crises or even new business models launch, expertise is inserted in that initial response to the stakeholder that is the most critical success factor. Initial responses should originate with trust, actions, role and responsibility.
- **Predictive Skill:** Next, most of the interviewees agreed that one indispensable skill for a 21<sup>st</sup> century leader are predictive of adaptability. He or she should be good in foreseeing what the future direction of the company is. As all things change rapidly, keeping in mind the previous paradigm of the operating business will no longer matter for the future; therefore, the ability to forecast will then be a huge advantage.
- **Cognitive Skill:** Despite us finding no correlation between the expert agile level and crisis management in the quantitative result, based on the qualitative interview, cognitive skills, like complex problem solving, critical thinking as well as decision making, are tools for managing future turbulence. Via intense complexity, cognitive skill to the interviewees meant a way to get thru the point well and how to understand the context with good design thinking.
- **Digital Literacy:** At the convergence of disruptive technology, technology will be both risks and opportunity. Historically, digital skills are a functional competency for operational level, while nowadays leaders should incline digital literacy skills to acquire the speed of opportunity given the appropriate digitalization.
- **Network and Collaborate:** An isolated leader will be useless while building a good network, as illustrated by Fujifilm still being a viable company but Kodak has shut-down. Even with technology advancing with time, soft-skills to improve stakeholder engagement nowadays are still necessary.

## Conclusion

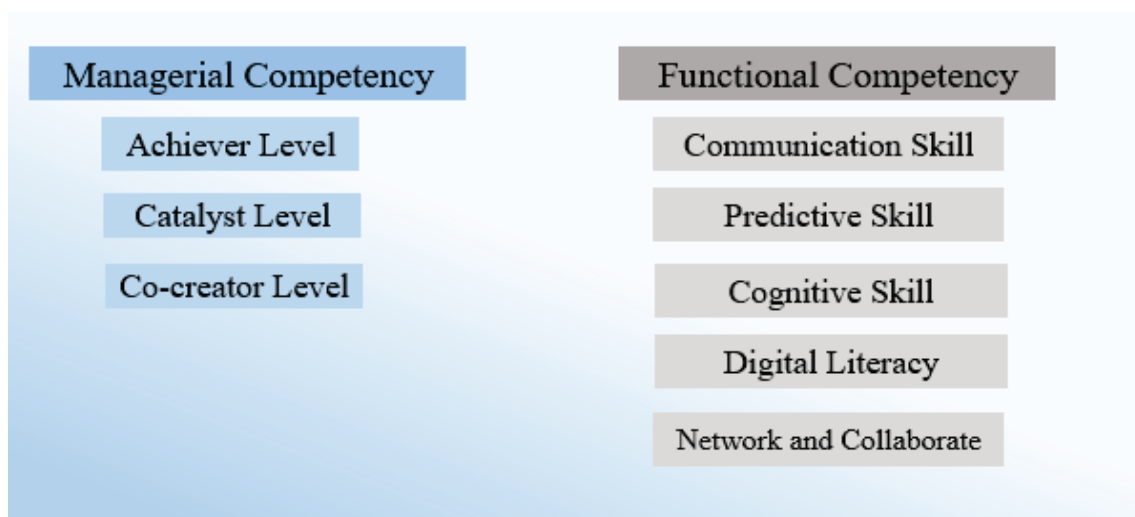
For the Thai-listed companies, the industrial sector did not matter. Every industry was confronted with a VUCA environment with equal levels as well as managing such a turbulent environment with the same competence. Managing turbulent environments is both an art and science, and is the most critical success factor for “leadership”.

The leadership paradigm has changed from classical, transactional, visionary and to organic (Gill, 2006). They alter competencies from command, power and control to a leader who has high competency in shared collective responsibilities. However, with volatility, uncertainty, complexity and ambiguity in the environment, it is a time when leaders should develop new future competencies to deal with such turbulent environments.

Based on empirical results, it displayed that a leader with agile competencies is a significantly positive asset for managing a turbulent environment. First of all, a leader in the 21<sup>st</sup> century should act as an “achiever character” who not only perceives short term goals but also predicts organizational long term goals. Secondly, there is a significantly positive link between the catalyst leader and managing a turbulent environment. To be a catalyst leader, they should try to encourage stakeholder engagement as well as sustain organizational growth with a new paradigm of management tools. To be precise, the old paradigm of management tools focused on how to maximize profit and minimize loss while today, to sustain growth, a leader should take the issues of corporate social responsibility (CSR) into account, for instance. In addition, the third competency a future leader should be competent in is the ability to maintain both macro and micro management as a “co-creator” character. Macro management is

concerned with the understanding of the corporate profile while the micro level of management is concerned with people-strategy. Under the new direction of organization, it will be difficult to succeed if all staff do not buy-in.

Apart from managerial competencies, at the operational level-functional, the most important competency is “communication”. Communication skills for leaders do not mean only for crisis communication, as in normal situations, communication is the initial response in any situation and is vital. Under a high level of uncertainty, forecasting techniques also pay an indispensable part; therefore, “predictive skill” for leaders to interpret the future direction is necessary. Moreover, the convergence between the qualitative result in this study and the 21<sup>st</sup> century skills proposed by the World Bank is “cognitive competency”. To have a high level of cognitive skill, the leader should be good at complex problem-solving as well as critical thinking. “Digital literacy” is a must for a leader who perceives technology as an opportunity for identification. Finally, a good relationship with the ecosystem thru enhancing the “network and collaborative” is also a 21<sup>st</sup> century leadership competency, as described in figure 6.



**Figure 6:** 21<sup>st</sup> century leadership competencies in turbulent environment

## Discussion and Policy Recommendations

Agile leadership has proven to be a vital competency for the 21st century. From the statistical analysis, there is a high predictive power between the effectiveness of managing a crisis and agile leadership. Some levels of agile leadership, expert and synergist, had insignificant impacts on the methods of turbulent management, and it could not prove that such a level of agile leadership did not mean anything for a managing crises, due to the lack of validity thru quantitative analysis. With this problem, the qualitative role itself was incursive to make the research findings more reliable and valid.

Based on mixed-methodology research considering the organizational level, the leadership should be trained and coached on both soft and hard skills. For the former, communication, team engagement and building good networks are a requirement. For the latter, constructing uniqueness in the corporate profile over both the short and long term, critical and logical thinking, digital literacy and high ability in forecasting should all be training for potential leaders. Moreover, as mentioned, such skills should also be in the process of selecting a leadership candidate.

Last but not least, as a researcher, I did not try to abort the previous paradigm of leadership; yet, it will benefit organizations to add such a proposed 21st century leader.

Regarding the turbulent environment, previous leadership competencies are not deemed to be enough for dealing with them as they previously have done.

### Future Research

With the mixed-method given the core quantitative analysis, this research ended up with the managerial competencies under an agile leadership framework and functional competencies thru in-depth interviews. However, for quantitative analysis, future research can employ other leadership frameworks. Philosophically, for the qualitative analysis, how many interviewees will be deemed enough (Brodbeck 1968)? Fortunately, the convergence of results throughout the qualitative analysis was found in this study, yet future research will include more than 10 experts in leadership to the process of qualitative analysis. Coding the analysis thru enough interviewees will make the qualitative findings more reliable. Ultimately, measuring the turbulent environment will be a multifaceted task that future research should derive with several theories in operationalization processes.

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