

# HOW ORGANIZATION PERFORMANCE DIFFER FROM KOREAN AND MALAYSIAN INFORMATION TECHNOLOGY (IT) COMPANIES?

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## ABSTRACT

*The main purpose of this study is to highlight the interaction effect between 'market orientation' which is recognized as a sustainable competitive advantage factor in the private sector and 'environmental turbulence' on the marketing capabilities which is one of the powerful antecedents of organizational performance, contrasting the IT companies in Korea and Malaysia believed to exist a certain difference in the capitalistic market economy system. It was found that there exists sharp contrast between two countries in that Korea showed a significant interaction effect between customer orientation and environmental turbulence, however, Malaysia showed no significant moderation effect. This result may implicate the difference in the process of market mechanism and environmental turbulence between the two countries.*

*Keywords: Market Orientation, Environmental Turbulence, Organizational Performance,*

## 1.0 INTRODUCTION

In the face of an increasingly competitive environment and an era of the pursuit for extreme performance, the deliberate search for organizational survival has emerged as an important challenge for all corporate organizations. In line with this shift of the management paradigm, in the academic field, major attention is focused on the factors that can ensure sustainable growth and development based on the creation of effective performance of corporate organizations. In addition, by developing a practical model, it supports all the strategic foundations that an organization needs.

Based on this overall trend, in the area of marketing, research on the topic of 'market orientation' has been actively conducted in the private sector

since the 1990s. Many of these studies (Greenley, 1995; Jaworski and Kohli, 1993; Slater and Narver, 1994a; Voss and Voss, 2000) have consistently demonstrated that the more market-oriented in the institution or culture of a particular organization, the higher the performance of the organization, while environmental factors such as competition and technology act as variables that significantly moderate the relationship between market orientation and organizational performance.

The effect of market orientation on business performance is pervasive when the perceived intensity of market competition is high because market competition typically intensifies as the product life cycle progresses (Atuahene-Gima, 1995). It impels managers to collect and disseminate market intelligence inputs so that attractiveness of various alternatives could be evaluated to enhance business performance (Song & Parry, 2009). There exist a lot of researches supporting the moderating role of environmental turbulence (Andotra & Gupta, 2016; Augusto & Coelho, 2009; Shin & Kim).

The main intention of this study is to highlight the necessary conditions for the growth and survival of IT companies by comparing two countries (Korea and Malaysia) which are believed to have some different backgrounds in the respect of history, processes and stages of capitalism. When it comes down to the IT industry, Korea is well known for its fully developed and still flourishing situation based on decades-long brilliant innovations and severe competition. On the other hand, Malaysia seems to have a little short history of capitalistic strategic investment and support initiated a little late by the government.

Today, despite the severe downturn in the economic situation, South Korea has the highest number of broadband users. The rapid growth of the Korean broadband market was the result of a combination of government pushes and market factors. The government was active in promoting privatization and deregulation in general, and the information technology (IT) sector was no exception. The government implemented structural reforms in July 1990. Since the mid-1990s, the Ministry of Information and Communications (MIC) has pursued a policy of high-speed telecommunication infrastructure as a foundation to build a “knowledge-based society.” In the telecommunications sector, the competition was allowed on an incremental basis and, in the market for value-added services, the full competition was allowed.

South Korea has one of the world's most active telecommunications and Information Technology (IT) markets backed by strong support from the government. As well as the commitment of the government, the sector is boosted by an innovative private sector and a technologically savvy population. Spending on ICT and high-technology equipment helped lead to a transformation of the economy. The government aims to transform the country into a knowledge-based information society in a 'smart-age'.

In the case of Malaysia, with the recent change in government after the General Election, the new government is reviewing all on-going and future projects. The National Information Technology Council of Malaysia (NITC) was established in 1994 and functions as the primary advisor to the government on ICT matters (British Malaysian Chamber of Commerce Berhad, 2018). Since that time, the government has been heralding Malaysia as a global ICT hub through the development of the Multimedia Super Corridor (MSC) flagship project, the computerization of several ministries and agencies, and the ongoing upgrade of Malaysia's telecommunications and IT infrastructure. During the 9<sup>th</sup> Malaysia Plan (2006-2010), the government initiated the MSC Net Leap program and expanded it into a network of cyber cities and centers throughout Malaysia. The sector continued its growth during the 10<sup>th</sup> Malaysia Plan (2011-2015) at an average rate of 6.8 percent per annum. Under the 11<sup>th</sup> Malaysia Plan (2016 – 2020) the government is striving to increase the ICT contribution to GDP to 17 percent from 13.1 percent during the 10<sup>th</sup> Malaysia Plan (Department of Statistics Malaysia, 2019a; Department of Statistics Malaysia, 2019b; Department of Statistics Malaysia, 2019c).

Malaysia aspires to be a developed nation by 2025. The ICT sector has been identified as a conduit in achieving this. During the 2015-2016 period, the key drivers identified to lead the ICT industry were: Big Data, the Internet of Things (IoT) and cloud computing. For 2017-2018, this has transitioned into the Fourth Industrial Revolution (4IR), and Industry 4.0, Fintech and BlockChain. Moving forward, the keys areas identified by IDC Malaysia as best prospects are: Big Data in the Cloud, Enterprise Mobility and Device Deployment, IoT, Cognitive Cybersecurity, Datacenter Vision and Fintech.

In this respect, the comparison of these two countries having some differences in the stage of development in IT field will give significant messages. Therefore, this study has two kinds of research objectives that are a) to analyze the main

effect of market orientation and environmental turbulence on the marketing capabilities as an important index of organizational performance in IT industry in two countries, Korea and Malaysia and b) to measure the moderating effect of environmental turbulence on the relationship between market orientation and marketing capabilities in IT industry in two countries.

## **2.0 LITERATURE REVIEW**

### **2.1 Requirements for Organizational Survival: Internal and External Fitness**

With the evolution and complexity of the organizational ecosystem, organizational theorists have long recognized that organizational and environmental interrelationships affect organizational survival and growth, recognizing the organization and its environment as separate and independent entities. Early research was limited in scope, focusing only on the task environment. Since then, environmental categories have been expanded and began to include cultural, social, political, technological, economic, demographic and other factors. (Morgan, 1989).

From a hermeneutical point of view, these studies are divided into more detailed fields such as contingency theory, resource dependence theory, ecology theory, and institutional theory. Nevertheless, all of these theories have in common the fact that they emphasize the need for an effective fit between the characteristics, needs and expectations of the organization (or organizational system) and the external environment for the survival and growth of the organization (Hatch, 1997).

### **2.2 Market Orientation**

Under the dynamic environment, consumer needs are becoming more complex and diverse. In this situation, the company's efforts to respond better to competitors' needs and anticipate changes are more liable to be market-oriented. Market Orientation gives firms a long-term perspective on profitability (Kim & Park, 2005), while market-oriented firms have organizations that can maximize strategic flexibility and time efficiency and adapt to their environment. The main focus of market orientation is the creation of superior customer value based on the knowledge gained from customers and competitors, providing satisfaction to customers and profit and growth to enterprises (Kim, 2011).

Narver and Slater (1990) presented three key components of market orientation: customer orientation, competitor orientation, and inter-functional coordination. Customer orientation is about understanding company's target audience so it can continue to deliver better value to its customers. Competitor orientation is a strong understanding of weaknesses, capabilities and strategies of key competitors. And cross-departmental coordination means harmonizing the use of corporate resources to create better value for target customers. The degree of market orientation of a business unit is measured by the average value of the ratings given by respondents (managers) on measures related to the three key elements.

### **2.3 Environmental Turbulence**

The business environment is a major factor that provides opportunities and threats for the company, and the company's performance is also achieved through continuous interaction with the environment (Lee & Park, 2006). In other words, companies are always faced with environmental adaptation problems because they survive and interact in the internal and external environment and grow and develop, and companies that cannot adapt to the environment are difficult to survive. In this sense, the environmental uncertainty of a company has a significant impact on organizational behavior (Suh & Lee, 2009), and has been emphasized in terms of value formation for learning in organizations (Daft & Weick, 1984). In other words, if the environment of the company changes rapidly and uncertainty increases, the company must continuously respond to changes in consumer demands, new technologies, competitors, etc., and it is forced to learn new things in order to survive. In this context, the organization's environmental uncertainty, market orientation, and learning orientation are closely related. In other words, the more perceiving that the organizational environment is fluid and difficult to predict, the stronger the market orientation and learning orientation, and the higher the organizational performance resulting from the indirect effects (Jaworski & Kohli, 1993).

Although many previous studies have attempted to generalize the concept of environmental uncertainty, the concept of environmental uncertainty is very complex and multidimensional, making it difficult to form an integrated theory system (Kim, 2011). According to Gergely (2016), which divides environmental uncertainty into environmental turbulence and environmental

hostility, turbulence is the sum of a number of uncontrollable variables that can have fatal consequences for a company, while hostility is the result of the market that many competitors are herding. From this point of view, the sub-variables that can reflect the environmental factors in these two contexts can be broken down into the market and technological turbulence caused by numerous uncontrollable factors, and the competition intensity caused by competition with competitors in the market.

## **2.4 Marketing Capabilities**

Marketing **Capabilities** is an important endogenous variable that affects organizational performance. It is an organizational competency that derives performance by using customer knowledge and resources to create customer value. Expanding the discussion of Day (1994) [9] about the marketing capabilities of market-oriented organizations, Vorhies, Harker and Rao (1999) found that organizations with superior marketing capabilities were more concerned with the behavior and response of competitors. He claimed that Marketing **Capabilities allows** competitive advantage in creating and responding to superior information, which in turn leads to superior organizational performance. In addition, organizations with excellent marketing capabilities can not only effectively understand customer needs and desires, but also better understand consumer behaviors such as purchasing choices and decision making, targeting target markets, positioning brands and products.

## **3.0 METHODOLOGY**

### **3.1 Sample of Study**

In this study, the target respondents were employees working in IT-based companies in Korea and Malaysia. The respondents were chosen by using the purposive sampling design. However, the delivery pattern was different between the two countries. In Korea, questionnaires were delivered by request through the human network. In Malaysia, the questionnaire form was uploaded into the Google form and answered by some respondents interested in this questionnaire. In Korea, 287 samples were involved in this study while in Malaysia was 170 samples. The detailed information on respondents' demographics in the two countries is as shown in Table 1.

**Table 1** Profiles of Respondents

| Profiles<br><i>f</i>             | Korea |          | Malaysia |      |
|----------------------------------|-------|----------|----------|------|
|                                  | %     | <i>f</i> | %        |      |
| Company's Years of Establishment |       |          |          |      |
| Under 5 Years                    | 60    | 209      | 46       | 27.1 |
| 5-10 years                       | 44    | 153      | 57       | 33.5 |
| 10-15 Years                      | 31    | 10.8     | 16       | 9.4  |
| 15-20 Years                      | 55    | 192      | 10       | 5.9  |
| Above 20 Years                   | 96    | 33.4     | 41       | 24.1 |
| Position                         |       |          |          |      |
| Rank & File                      | 55    | 192      | 70       | 41.2 |
| Low Manager                      | 30    | 10.5     | 19       | 11.2 |
| Middle Manager                   | 55    | 192      | 66       | 38.8 |
| High Manager                     | 4     | 1.4      | 11       | 6.5  |
| Executive                        | 109   | 38.0     | 4        | 2.4  |
| Age                              |       |          |          |      |
| Under 30                         | 35    | 12.2     | 84       | 49.4 |
| 30-40                            | 54    | 18.8     | 79       | 46.5 |
| 40-50                            | 88    | 30.7     | 7        | 4.1  |
| 50-60                            | 87    | 30.3     | 0        | 0    |
| Above 60                         | 12    | 4.2      | 0        | 0    |

### 3.2 Instrument Development

#### 3.2.1 Market Orientation (MO)

Measures of market orientation were adopted from Narver and Slater(1990), Slater and Narver (1994a) and Slater and Narver (1994b). These scholars defined MO as containing three dimensions such as (i) customer orientation which means a sufficient understanding of customers and a corporate behavioral attitude shared by organizational members toward the needs or wants of customers to create products or services of superior value for them, (ii) competitor orientation which means the degree of organizational understanding for the strengths and weaknesses of its current and possible future competitors as well as their long-term capabilities and strategies, and (iii) inter-functional integration which means the coordinated utilization of

company resources in creating superior value for its customers. The number of questionnaire items to measure these three constructs was respectively 6 items. So, the total number of items in MO was 18.

### **3.2.2 Environmental Turbulence (ET)**

In previous empirical research, Jaworski and Kohli (1993) used the concept of environmental turbulence as a moderating variable that moderates the relationship between market orientation and business performance. They defined ET as containing three dimensions such as (i) market turbulence, which indicates the degree of change in customer's characteristics and their preferences, (ii) competitive intensity, which means competition between competitors, competition in promotion and price, and (iii) technological turbulence, which means the degree of technological change, the degree of technological competition among companies and the possibility of new product appearance. The number of questionnaire items to measure these three constructs was respectively 5, 6 and 3 items. So, the total number of items in ET was 14.

### **3.2.3 Marketing Capabilities (MC)**

In this study, the dependent variable selected as the organizational performance index was marketing capabilities. MC connotes differentiated ability in several aspects such as marketing research, salespeople or marketing manpower, marketing strategy, advertising or promotion, and service. The number of questionnaire items to measure this MC was 5 items.

## **3.3 Research Framework and Hypotheses**

In this study, market orientation had been assigned as the independent variable while marketing capabilities was acted as the dependent variable. For moderation relationship, environment turbulence was predicted to moderate the relationship between market orientation and marketing capabilities. Therefore, the hypotheses of this study are shown below:

H1: There is a significant effect of market orientation on marketing capabilities.

H2: There is a significant effect of environmental turbulence on marketing capabilities.

H3: Environmental turbulence will moderate the relationship between market orientation and marketing capabilities.



Figure 1 demonstrates the research framework of this study.

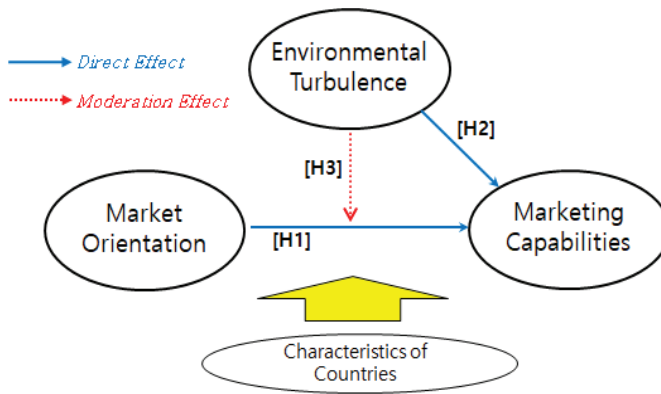


Figure 1 Research Framework and Hypotheses

## 4.0 RESULTS

### 4.1 Factor Analysis

First, factor analysis and reliability test were performed to attain the validity and reliability of measurement. The method of factor analysis was Varimax Rotation and Principal Component Analysis. In this phase, Commonality means the rate explained by extracted elements. When the figure of this commonality is under 0.4, the general guideline is to accept this figure. However, the guideline was enhanced up to 0.5 to adopt stricter yardstick. Likewise, the figure of factor loading was also gone higher as 0.5, a little stern standard than 0.4 of general yardstick.

Table 2 shows the results of the factor analysis and reliability test for two countries on the major constructs highlighted in this study.

**Table 2** Results on Factor Analysis

|                            |                               | Korea                |       |      | Malaysia             |       |      |
|----------------------------|-------------------------------|----------------------|-------|------|----------------------|-------|------|
|                            |                               | Cronbach<br>$\alpha$ | Mean  | KMO  | Cronbach<br>$\alpha$ | Mean  | KMO  |
| Market Orientation         |                               |                      |       |      |                      |       |      |
|                            | Inter-functional coordination | .844                 | 3.616 |      | .918                 | 3.657 |      |
|                            | Customer orientation          | .840                 | 3.964 | .931 | .915                 | 3.780 | .941 |
|                            | Competitor orientation        | .879                 | 3.456 |      | .866                 | 3.454 |      |
| Environmental Turbulence   |                               |                      |       |      |                      |       |      |
|                            | Turbulence of market          |                      |       |      | .900                 | 3.688 |      |
|                            | Turbulence of Technology      | .829                 | 3.729 | .860 | .811                 | 3.707 | .907 |
|                            | Intensity of Competition      | .852                 | 3.643 |      | .922                 | 3.688 |      |
| Organizational Performance |                               |                      |       |      |                      |       |      |
|                            | Marketing Capabilities        | .947                 | 3.230 | .854 | .938                 | 3.522 | .868 |

In case of Korea, as seen from the table, KMO(Kaiser-Meyer-Olkin) value for MO, ET, and OP(MC) were 0.931, 0.860, and 0.854 respectively, and Bartlett Test P-value were all .000. And Chronbach  $\alpha$  ranged from 0.829 to 0.947. In this case, the factor scores produced for each construct through factor analysis are independent one another, the mean score of every frame is 0, and the standard deviation is 1. This result means that all figures of factor analysis for the constructs of Korean case are excellent and acceptable.

In case of Malaysia, as seen from the table, KMO(Kaiser-Meyer-Olkin) value for MO, ET, and OP(MC) were 0.941, 0.907, and 0.868 respectively, and Bartlett Test P-value were all .000. And Chronbach  $\alpha$  ranged from 0.811 to 0.938. Also in this case, the factor scores produced for each construct through factor analysis are independent one another, the mean score of every frame is 0, and the standard deviation is 1. This result means that all figures of factor analysis for the constructs of Korean case are excellent and acceptable.

## 4.2 Direct Effect

H1 and H2 connote that market orientation and environmental turbulence will have significant positive effects on marketing capabilities. Multiple regression was executed to certify these two hypotheses for the data from the two countries. In regression, the enter method was used.

As shown in Table 3, all three variables from market orientation, that is, customer orientation, competitor orientation, and inter-functional coordination were found to have significant effects on marketing capabilities (respective p-value are .009, .000, and .001) among Korean respondents. And also two variables from environmental turbulence, that is, turbulence of Market & Technology and Intensity of competition were found to be significant(respective p-value are .000, and .000).

**Table 3** Results on Multiple Regression Analysis (Korea)

|   |                               | Non-standardized Coefficient |      | Standardized Coefficient | t      | p-value | Colinearity (VIF) |
|---|-------------------------------|------------------------------|------|--------------------------|--------|---------|-------------------|
|   |                               | B                            | S.E  | Beta                     |        |         |                   |
| Market orientation                                      | Constant                      | 3.231                        | .040 |                          | 79.915 | .000    |                   |
|   | Customer orientation          | .229                         | .088 | .165                     | 2.617  | .009    | 1.990             |
|   | Competitor orientation        | .432                         | .072 | .373                     | 6.034  | .000    | 1.920             |
|   | Inter-functional coordination | .259                         | .077 | .216                     | 3.384  | .001    | 2.046             |
| (Revised R <sup>2</sup> = . 432, Durbin-Watson = 1.803) |                               |                              |      |                          |        |         |                   |
| Environmental turbulence                                | Constant                      | 3.231                        | .046 |                          | 69.523 | .000    |                   |
|   | Turbulence of market          | .362                         | .068 | .329                     | 5.356  | .000    | 1.440             |
|   | Turbulence of technologies    | .315                         | .080 | .329                     | 3.926  | .000    | 1.440             |
| (Revised R <sup>2</sup> = . 249, Durbin-Watson = 1.684) |                               |                              |      |                          |        |         |                   |

On the other hand, in case of Malaysia, only two variables from market orientation, that is, competitor orientation and inter-functional coordination were shown significant (respective p-value are .025, and .000) (refer Table 4). And also, only two variables from environmental turbulence, that is, the

turbulence of market and turbulence of technology were shown significant (respective p-value are .000, and .001).

**Table 4** Results on Multiple Regression Analysis (Malaysia)

|  |                               | Non-standardized Coefficient |      | Standardized Coefficient | t     | p-value | Colinearity (VIF) |
|--|-------------------------------|------------------------------|------|--------------------------|-------|---------|-------------------|
|  |                               | B                            | S.E  | Beta                     |       |         |                   |
| Market orientation                                     | Constant                      | .5516                        | .043 |                          | -.001 | .999    |                   |
|  | Customer orientation          | .127                         | .103 | .115                     | 1.239 | .217    | 3.1520            |
|  | Competitor orientation        | .179                         | .079 | .171                     | 2.267 | .025    | 2.070             |
|  | Inter-functional coordination | .531                         | .101 | .508                     | 5.254 | .000    | 3.401             |
| (Revised R <sup>2</sup> = .535, Durbin-Watson = 2.262) |                               |                              |      |                          |       |         |                   |
| Environmental turbulence                               | Constant                      | .4107                        | .051 |                          | -.001 | .999    |                   |
|  | Turbulence of market          |                              |      |                          |       |         |                   |
|  | Turbulence of technologies    | .323                         | .089 | .303                     | 3.634 | .000    | 1.777             |
|  | Intensity of competition      | .091                         | .089 | .085                     | 1.028 | .306    | 1.768             |
| (Revised R <sup>2</sup> = .339, Durbin-Watson = 1.982) |                               |                              |      |                          |       |         |                   |

Based on these results, H1 and H2 describing that market orientation and environmental turbulence will have significant positive effects on marketing capabilities that were fully proved in the case of Korea. However, they were partial in the case of Malaysia.

**4.3 Moderation Effect**

H3 connotes that environmental turbulence will moderate the relationship between market orientation and marketing capabilities, that is, environmental turbulence will interact with market orientation, and then will have a significant effect on marketing capabilities. The following shows interaction(moderating) effects implemented between constructs, after being processed using multiple regression for two countries respectively.

#### 4.4 Korean Case

First, In case of interaction between market orientation and environmental turbulence in Korea, only customer orientation among 3 variables from market orientation was found to interact positively with two dimensions of environmental turbulence, that is, the turbulence of market and turbulence of technology (p-value is .006), and intensity of competition (p-value is .013) (Refer Table 5 and Table 6).

To check these results based on the graph, the interaction diagrams were produced. Figure 2 shows that when the degree of turbulence of market & technology becomes higher, the higher the degree of customer orientation, the higher the marketing capabilities as organizational performance (positive interaction effect). Likewise, Figure 3 also shows that when the degree of customer orientation becomes higher, and the degree of intensity of competition also becomes higher, the marketing capabilities increases significantly (also positive interaction effect). This result implies that when customer orientation as a way of market orientation is high enough, the interaction of environmental turbulence onto the customer orientation works positively for the marketing capabilities.

**Table 5** Result on Moderation Analysis (Interaction effect between Customer Orientation and Turbulence of Market & Turbulence of Technology)

| Summary of Model |      |                |                        |                           |          |                     |               |
|------------------|------|----------------|------------------------|---------------------------|----------|---------------------|---------------|
| Model            | R    | R <sup>2</sup> | Revised R <sup>2</sup> | Change of Statistics      |          |                     | Durbin-Watson |
|                  |      |                |                        | Changes of R <sup>2</sup> | F change | p-value of F change |               |
| 1                | .537 | .289           | .286                   | .289                      | 115.629  | .000                |               |
| 2                | .594 | .352           | .348                   | .064                      | 27.965   | .000                |               |
| 3                | .608 | .369           | .363                   | .017                      | 7.642    | .006                | 1.749         |

| Coefficient |   |       |         |        |         |       |
|-------------|---|-------|---------|--------|---------|-------|
|             | Model   | B     | $\beta$ | t      | p-value | VIF   |
| 1           | (constant)                                      | 3.231 |         | 71.311 | .000    |       |
|             | Customer Orientation                            | .748  | .537    | 10.753 | .000    | 1.000 |
| 2           | (constant)                                      | 3.231 |         | 74.608 | .000    |       |
|             | Customer Orientation                            | .576  | .414    | 7.792  | .000    | 1.238 |
|             | Turbulence of Market & Turbulence of Technology | .308  | .281    | 5.288  | .000    | 1.238 |

(continued)

(continued)

|   |       |        |       |      |       |
|---|-------|--------|-------|------|-------|
| (constant)  | 3.181 | 68.518 | .000  |      |       |
| Customer Orientation  | .580  | .417   | 7.935 | .000 | 1.238 |
| 3 Turbulence of Market & Turbulence of Technology                     | .325  | .296   | 5.609 | .000 | 1.252 |
| Customer Orientation*Turbulence of Market & Turbulence of Technology. | .211  | .132   | 2.764 | .006 | 1.016 |

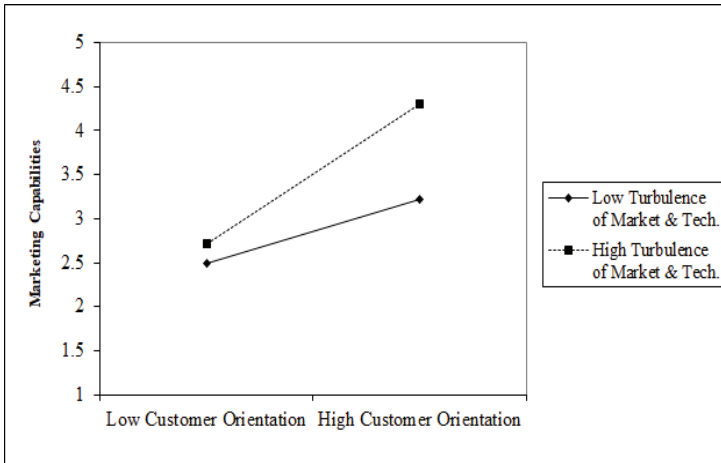


Figure 2 Moderation Graph 2 (Interaction effect between Customer Orientation and Turbulence of Market & Turbulence of Technology)

Table 6 Result on Moderation Analysis (Interaction effect between Customer Orientation and Intensity Competition)

| Summary of Model |      |                |                        |                           |          |                     |               |
|------------------|------|----------------|------------------------|---------------------------|----------|---------------------|---------------|
| Model            | R    | R <sup>2</sup> | Revised R <sup>2</sup> | Change of Statistics      |          |                     | Durbin-Watson |
|                  |      |                |                        | Changes of R <sup>2</sup> | F change | p-value of F change |               |
| 1                | .537 | .289           | .286                   | .289                      | 115.629  | .000                |               |
| 2                | .573 | .329           | .324                   | .040                      | 16.929   | .000                |               |
| 3                | .586 | .343           | .336                   | .014                      | 6.181    | .013                | 1.620         |

| Coefficient           |       |         |        |         |       |
|-----------------------|-------|---------|--------|---------|-------|
| Model                 | B     | $\beta$ | t      | p-value | VIF   |
| 1 (constant)          | 3.231 |         | 71.311 | .000    |       |
| Customer Orientation  | .748  | .537    | 10.753 | .000    | 1.000 |
| 2 (constant)          | 3.231 |         | 73.277 | .000    |       |
| Customer Orientation  | .605  | .435    | 7.960  | .000    | 1.262 |
| Intensity Competition | .294  | .225    | 4.115  | .000    | 1.262 |

(continued)

(continued)

|   |  |       |      |        |      |       |
|---|--|-------|------|--------|------|-------|
|   | (constant)                                 | 3.187 |      | 67.681 | .000 |       |
|   | Customer Orientation                       | .634  | .455 | 8.315  | .000 | 1.291 |
| 3 | Intensity Competition                      | .298  | .228 | 4.205  | .000 | 1.263 |
|   | Customer Orientation*Intensity Competition | .212  | .122 | 2.486  | .013 | 1.034 |

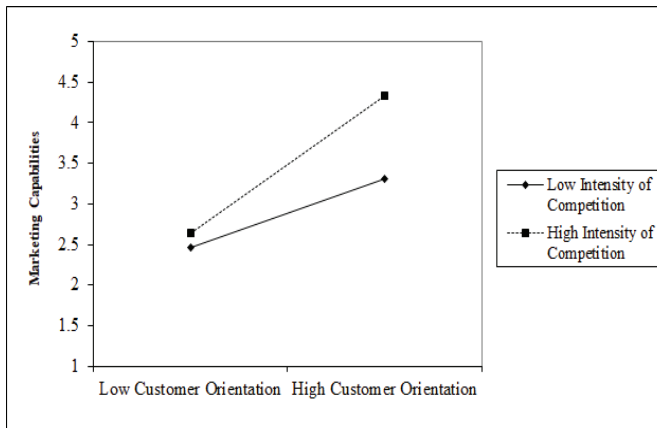


Figure 2 Moderation Graph 2 (Interaction effect between Customer Orientation and Intensity Competition)

#### 4.5 Malaysian Case

In case of Malaysia, there were shown no significant interaction effect in every aspect between market orientation and environmental turbulence even though all constructs showed relatively higher correlation between them.

#### 4.6 Summary of Hypotheses Testing

The result of the hypotheses test shows that Korea and Malaysia hold a little different pattern in direct effect and interaction effect (refer to H3). Comparing with the Korean case showing perfect direct effect and partial moderation effect, the Malaysian case showed partial direct effect and no moderation effect (refer to H3).

## 5.0 DISCUSSION

First, in Korea, all three variables of market orientation, that is, customer orientation, competitor orientation and inter-functional coordination were found to have significant positive effects on marketing capabilities. And then, in case of environmental turbulence, both variables which were reduced, through factor analysis, into two elements such as turbulence of market & technology and intensity of competition were also found to have a significant positive effect on the marketing capabilities. On the other hand, in Malaysia, two factors such as competitor orientation and inter-functional coordination among the three variables constituting market orientation were shown to have positive significant effects on marketing capabilities. And in case of environmental turbulence, also only two variables, that is, the turbulence of market and turbulence of technology were shown to have a significant positive effect on the marketing capabilities.

Based on these results, H1 and H2 describing that market orientation and environmental turbulence will have significant positive effects on the marketing capabilities that seem to be fully approved in case of Korean IT firms. However in Malaysia, H1 and H2 were partially approved since customer orientation from market orientation, and intensity of competition from environmental turbulence was excluded as being insignificant. Second, when it comes to the interaction effect between market orientation and environmental turbulence, two countries showed so clear contrast. In case of Korea, two kinds of interaction among nine interaction patterns proved to be significant. On the other hand, Malaysia showed no interaction effects on all types of patterns.

This contrasting result may be understandable when the decades-long history of development in the IT industry becomes highlighted. As well known to every, Korea started to take to the IT field a little late than Japan or Finland. For the past 1980s and 1990s, the powerful nations in the world were US, Japan, and Finland in the respect of the IT industry. That time, Korea showed no plausible competitive advantage in the field of IT. Coming through 21 century, however, Korea began to jump to a higher position based on the incessant investment, efforts, and research & development initiated by Samsung, LG Electronics (LG), Korea Telecom (KT) or SK. During almost two decades after take-off, Korea and these several successful companies had well endured



the long painful process of a competition initiated by the dramatic change of consumer's needs and brilliant innovations, which eventually made them attain today's successful position.

This background made it possible for Korean IT companies to be more alert and adept to competitive peers within a domestic or global ecosystem for their survivor, allowing genuine and delicate interaction among important constructs such as market orientation and environmental turbulence. The lesson here is that in a capitalistic market mechanism, market orientation is so important for enhancing marketing capabilities as an essential antecedent of superior organizational performance. However, that is not enough. Some energizer fueling market orientation is also needed. This is just the place that environmental turbulence comes in. When these two factors can interact, the synergy for organizational performance would be maximized.

The result of interaction effect analysis revealed that only customer orientation from three variables of market orientation interacts with two reduced dimensions of environmental turbulence, that is, turbulence of market & technology and intensity of competition. This means that probably in the severe fluctuation of market and technology and extreme competition, Korean IT firms should have focused more on the customer orientation than other two dimensions such as competitor orientation and inter-functional coordination for their survivor and performance, other things being equal.

Comparing with this Korean case, Malaysia began to get into the field of IT a little behind. So, its process of IT development seems to have still a little bit long way to go. In that sense, Malaysian IT companies seem to have not yet experienced enough competition like Korea. The result of the Malaysian interaction effect showing no significant moderation is recognizable in this respect. This result may implicate the difference in the process of market mechanism and environmental turbulence between the two countries.

## **6.0 CONCLUSION**

The main purpose of this study is to highlight the causality among major constructs such as market orientation, environmental turbulence and marketing capabilities. In case of research framework, three hypotheses were established to testify direct effect of market orientation as an independent

variable, and environmental turbulence as a moderation variable on to the marketing capabilities as a dependent variable [H1 and H2, respectively], as well as moderating effect of environmental turbulence working between marketing orientation and marketing capabilities [H3].

In case of sampling, there exist two prerequisites. One is about methodology. In this study, the author decided to perform a comparative study between Korea and Malaysia. This is to highlight more clearly the meaning and lesson of important conditions for desirable outcomes by contrasting two countries believed to have experienced some different process of the market mechanism. The other is about the industry. The author determined to select the IT industry since the Korean IT industry as a fully matured market mechanism and recent Malaysian one as the fast developing market mechanism was considered a good match for this comparative study.

When it comes to interaction effect between market orientation and environmental turbulence, two countries showed so clear contrast. In case of Korea, two kinds of interaction among nine interaction patterns proved to be significant. On the other hand, Malaysia showed no interaction effects on all types of pattern. This contrasting result may be understandable when the decades-long history of development in the IT industry becomes highlighted.

The final implication may well be described as following: as the capitalistic market mechanism goes mature and motivates extreme competition among rival companies, the authentic interaction between market orientation and environmental turbulence is such an essential element for sustainable competitiveness and long-term survival.

Notwithstanding several meaningful findings, this study includes some limitations. Especially, this study utilized a quantitative methodology, and this means that this study can comprise common deficits a quantitative methodology may have. In this study, the total samples were 287 in Korea, and 170 in Malaysia. Even if there were no biased statistical outputs, it would be desirable if more abundant samples can be acquired in the future study. Then, it would be expected more significant results can be attained.

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