



## THE RELATIONSHIP AMONG TRANSFORMATIONAL LEADERSHIP, ORGANIZATIONAL LEARNING, AND ORGANIZATIONAL INNOVATION: A CASE STUDY IN ASIAN MANUFACTURING FOOD INDUSTRY

Che Wan Jasimahbt Wan Mohamed RADZI<sup>1</sup>

Huang HUI<sup>2</sup>

Hashem Salarzadeh JENATABADI<sup>3</sup>

Farihah Abu KASIM<sup>4</sup>

Son RADU<sup>5</sup>

### ABSTRACT

*The main purpose of this study to find out the relationship among transformational leadership (TL), organizational learning (OL), and organizational innovation (OI) in manufacturing food industry in east of Asia countries include China, Taiwan, and Malaysia. Structural equation modeling (SEM) was used to test the research hypotheses from 168 manufacturing food companies. Our research model contains three constructs, and the results showed there is positive impact between constructs. Also, Organizational learning is a mediator in the linkage between transformational leadership and organizational innovation.*

**Keywords:** Transformational leadership, Organizational learning, Organizational innovation

### INTRODUCTION

In organizational studies, there are different definitions for TL, OL, and OI. TL is defined the style of leadership that heightens consciousness of collective interest among members of the organization and assist in achieving collective goals (García-Morales *et al.*, 2012). OL is defined as the capability of an organization to maintain or improve performance based on experience (DiBella *et al.*, 1996). But, OI is topic of many disciplines such as management/strategy, entrepreneurship, political science and marketing in which OI is thoroughly examined and discussed. However, majority of the relevant literatures have focused on technological innovation (Freeman *et al.*, 2000) which has driven the studies into restricted and biased views in this regard, criticized in studies on OI (Barras, 1990; Avlonitis *et al.*, 2001). The literature on management studies highlight the vital role that both TL (Jung *et al.*, 2003; Gumusluoglu and Ilsev, 2009; Paulsen *et al.*, 2013; Hu *et al.*, 2013), and OL (Chiva *et al.*, 2013; Salim and Sulaiman, 2013; Asheim, 2011) play in enhancing a firm's innovativeness. Some studies find out that TL and its output is antecedents of learning (Zagoršek *et al.*, 2009; Theodore, 2013; Lam, 2002; Jokar *et al.*, 2012). Moreover, some of them do believe that learning with TL actvital roles in supporting companies to achieve within the innovation process (Hsiao and Chang, 2011; Sanders and Shipton, 2012; Wang, 2011). Therefore, OL, TL, and OI impact positively and significantly to each other. Nevertheless, research those

<sup>1</sup> Ph.D, Senior Lecturer, Science and Technology studies Department, University of Malaya, Malaysia. **Email:** [jasimah@um.edu.my](mailto:jasimah@um.edu.my)

<sup>2</sup> Ph.D candidate, Research Assistant, Science and Technology studies Department, University of Malaya, Malaysia.

**Email:** [huang1982hui@gmail.com](mailto:huang1982hui@gmail.com)

<sup>3</sup> Ph.D, Research Assistant, Applied Statistics Department, University of Malaya, Malaysia. **Email:** [hashem.salarzadeh@gmail.com](mailto:hashem.salarzadeh@gmail.com)

<sup>4</sup> Ph.D candidate, Research Assistant, Science and Technology studies Department, University of Malaya, Malaysia.

**Email:** [farihah.abukasim@gmail.com](mailto:farihah.abukasim@gmail.com)

<sup>5</sup> Ph.D, Professor, Food Science & Technology, University of Putra Malaysia, Malaysia. **Email:** [son@putra.upm.edu.my](mailto:son@putra.upm.edu.my)

studies, in manufacturing food industries, the interrelationships among the three concepts is still scarce. This paper examines the effect of TL on OL and OI and argues for the importance of empirical results that prove these relationships in Asian manufacturing food companies. The model also attempts to demonstrate the existence of a positive and significant relationships between OL and OI. The relatively limited attention to these issues in practice contrasts with their importance to technicians and practitioners.

## LITEARTURE REVIEW

### **Linkage between TL and OI**

One of the potentials of TL is being a strong tool for the development of OL in the organizations and companies (Slater and Narver, 1995). There have been previous studies which claim a relationship between leadership style (LS) & OL (Bass, 2000; Amitay *et al.*, 2005; Kurland *et al.*, 2010) and TL & OL (Sung, 2012; Lam, 2002; Choupani *et al.*, 2013). TL constructs teams and groups and also brings to them a path to follow, force, and support for the processes of change and OL (McDonough, 2000). Once applied, the profit or non-profit organizations would be able to learn by means of communicating & mutual talks, exploring, and experimenting (Tushman and Nadler, 1986; Menguc *et al.*, 2007). To be more specific, TL boosts OL by increasing intellectual arousal and improving inspirational motivation and self-confidence in and among the members of the organization (Coad and Berry, 1998). Thus the manager who practices TL would take the roles of a catalyst, a consultant, a facilitator and also a trainer in the process of OL (García-Morales *et al.*, 2012). Therefore, the first hypothesis of this paper is:

H<sub>1</sub>: There is a significant impact of TL on OL.

### **Linkage between OI and OI**

During the last decade, the quite large number of studies on OL have enriched the literature on OI (García-Morales *et al.*, 2012). The mentioned research have by and large have claimed a positive relationship between OI and OL (Liao *et al.*, 2008; Cohen and Levinthal, 1990; Wignaraja, 2012; Bao *et al.*, 2012; Liao *et al.*, 2012). Organizations which care about learning enhance their innovative ability because they will most probably not miss the chances which the new market demand brings about. These organizations have sufficient power and knowledge to predict and learn about what customers need, have modern and updated technology available to them which helps them to innovate. In addition, their capacity to understand the strengths and weaknesses of the rivals is greater which assists them to learn from their achievements and failures on one hand and create more innovative potentials than rivals on the other hand (Calantone *et al.*, 2002). Such opinions have lately started to get some empirical attention. To begin with Hurley and Hult (1998) have concentrated on a large organization in the federal government of the USA. They showed a positive relationship between OI and a culture which promotes and stresses adapting, innovating and learning. In another study (Meeus *et al.*, 2001), researchers analyzed a certain number of innovative companies as a sample to demonstrate that the more highly complex innovative activities are, the higher is the need for the firms to coordinate and disseminate information with and to the users which in turn would mean a powerful interactive learning. Therefore, we in this part of the paper we can define the second research hypothesis as bellow:

H<sub>2</sub>: There is a significant impact of OL on OI.

### **Linkage between TL and OI**

In the literature, LS (Lee and Chang, 2006; Bhattacharyya, 2006; Fafrowicz *et al.*, 1993) and TL (Jung *et al.*, 2003; Gumusluoglu and Ilsev, 2009; Paulsen *et al.*, 2013) have been highlighted as a particularly important impact on OI. There is now widespread agreement that TL style (Moss Kanter, 1983), being collaborative and participatory, seems to be more successful than the LS

(Manz *et al.*, 1989) in encouraging innovation within the organization. What managers perceive of their roles in the organizations where they manage, has a strong influence on the potential to enhance such leadership in their organization. A number of TL's characteristics are said to be relevant for firm innovation (Shao and Webber, 2006). The transformational leaders share a common interactive view: strengthening an effective communication and value sharing (Adair, 1990) and also creating a proper atmosphere for innovative teams (Tushman and Nadler, 1986) are of utmost importance. They are in favor of holistic processes of OL (Manz *et al.*, 1989), mutual confidence between the members of the organization and the leaders (Scott and Bruce, 1994) and supportive views in regard with proactivity, risk (Lefebvre and Lefebvre, 1992) and creativity (Tierney *et al.*, 1999). These characteristics all would make it possible for us to better understand the potent relations between TL and the factors which positively affect OI (Moss Kanter, 1983). In this regards, in our paper we will examine the following hypothesis:

H<sub>3</sub>: There is a significant impact of TL on OI.

## METHOD

### Sampling

A quantitative research survey is employed to examine the hypotheses proposed in the research framework. The data collection period spanned between October 2012 and February 2013 for a period of five months. The prepared questionnaires were distributed among 650 randomly selected from food manufacturing in Malaysia, Taiwan, and China. Senior manager, director manager, or CEO, were chosen as the key informants. Only 168 food manufacturing companies returned the completed (without missing data) questionnaires which provide d this study with a response rate of 26%.

### Measures

The research model includes three constructs which are TL, OL, and OI. The first construct, initial independent variable, is TL which is measured with four dimensions based on McColl-Kennedy and Anderson (2002) study. These are individualized consideration (TL1), intellectual stimulation (TL2), inspirational motivation (TL3), and idealized influence (TL4). The second construct is OL and there are some literature on theoretical (Lei *et al.*, 2000, Slater and Narver, 1993) and empirical (Baker and Sinkula, 1999, Hurley and Hult, 1998, Salim and Sulaiman, 2011, Som *et al.*, 2012) studies, this research measures the OL based on Jerez-Gomez *et al.*, (2005) study which is considered four dimensions; management commitment (OL1), system perspective (OL2), openness and experimentation (OL3), and knowledge transfer and integration (OL4). The third construct is OI which is considered as dependent in the research model. OI has some theoretical (Manu, 1992, Liu, 2004) and empirical (Jiménez-Jiménez and Sanz-Valle, 2010) literature. The current research measure the OI construct based on Damanpour (1991) study which is determined two main dimensions include administrative (OI1) and technical (OI2) innovation.

### Results

Table 1 shows the descriptive statistics contains means and standard deviations of the latent variables, and the correlations between them. Relationship between TL and OL (R = 0.372): TL has a significant impact on OL, meaning that in food manufacturing industry include China, Malaysia, and Taiwan with more TL show higher capability in enhancing effective OL. Relationship between OL and OI (R = 0.442): OL has a significant impact on OI, meaning that in food manufacturing industry include China, Malaysia, and Taiwan with more OL show higher capability in enhancing effective OI in two dimensions of technical and administrative innovation. Relationship between TL and OI (R = 0.782): TL has a significant impact on OI, meaning that in food manufacturing industry include China, Malaysia, and Taiwan with more TL show higher capability in enhancing effective OI in two dimensions of technical and administrative innovation.

**Table 1: Descriptive statistics and correlation between the research constructs**

indicators	Mean	STD	Correlation Matrix		
			Transformational Leadership	Organizational Learning	Organizational Innovation
Transformational Leadership	3.58	.86	1.000		
Organizational Learning	3.84	.63	0.372	1.000	
Organizational Innovation	3.27	.85	0.782	0.442	1.000

Note: \*\*\* p<0.001(two-tailed). N= 168

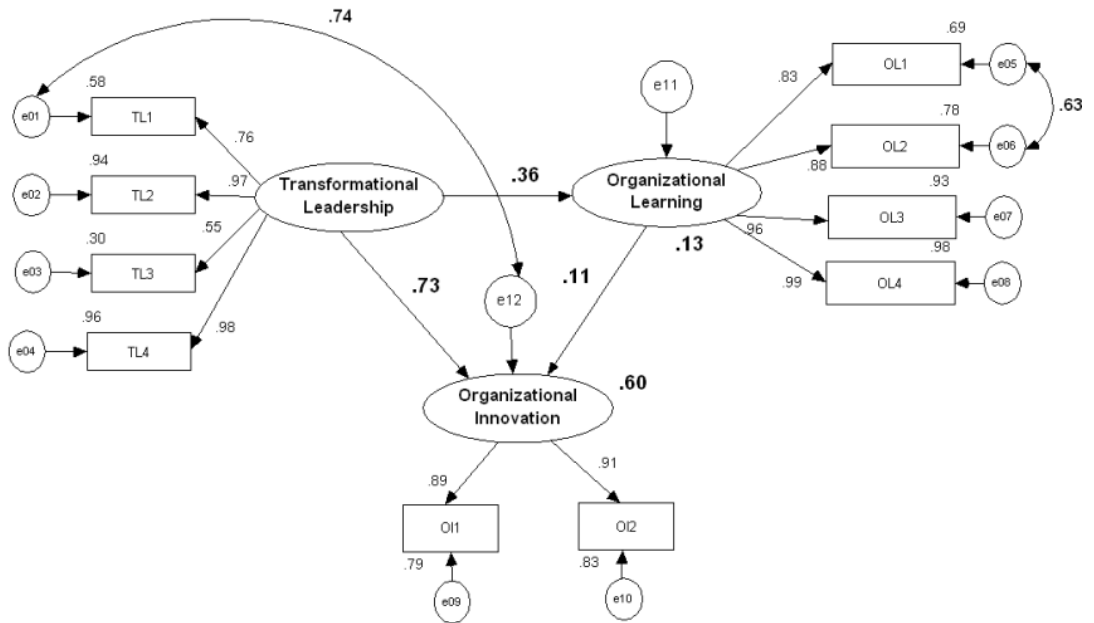
Table 2 presents the overall path model fit and the all hypothesis and Figure 1 shows casual research model. As shown in Table 2, the statistic indicators of path analysis proof an adequate fit: comparative fit index [CFI] =0.941; adjusted goodness-of-fit Index [AGFI] =0.928; goodness-of-fit index [GFI] = 0.931; normed fit index [NFI] = 0.928; incremental fit index [IFI] = 0.941; Tucker–Lewis index [TLI] = 0.912 and root mean square error of approximation [RMSEA] = 0.051. The impact of the TL to OL ( $H_1$ ;  $\beta_1 = 0.36$ , Critical Ratio (C.R) = 4.484) is positive and significant. The positive impact of OL to OI ( $H_2$ ;  $\beta_2 = 0.11$ , C.R = 2.298) is also supported by our findings. While we have expected to illustrate a strong positive significant impact of TL to OI ( $H_3$ ;  $\beta_3 = 0.73$ , C.R = 13.576) which has the highest relationship to compare TL & OL and OL & OI in the research model. Our findings yield a significant impact among these three constructs.

**Table 2: Results for theoretical model**

Hypotheses	Path	Standardized coefficient	C. R.	p	Result
$H_1$	Transformational leadership → Organizational Learning	0.36	4.484	< 0.01	Supported
$H_2$	Organizational Learning → Organizational Innovation	0.11	2.298	0.022	Supported
$H_3$	Transformational leadership → Organizational Innovation	0.73	13.576	< 0.01	Supported
AGFI=0.928	CFI = 0.941	IFI = 0.941	CFI = 0.941		
GFI = 0.931	NFI = 0.928	TLI = 0.912	RMSEA = 0.051		

## DISCUSSION

TL is crucial to controlling OL and improving OI in changing and competitive business environments. This study adds value to OI literature by manifesting the vital role OL and TL play in the process in food manufacturing companies. Managing these variables results to the emergence of values within the organization that make copying difficult. To successfully deal with this kind of environments, this article has some discussions as following:



**Figure 1: Research model**

Firstly, in manufacturing food industry, TL and OL and OI reported a positive relationship which is confirmed by other studies in organizational studies (Wang, 2011; Sanders and Shipton, 2012; Hsiao and Chang, 2011). This LS alters, analyses, drives and design the system to share and diffuse knowledge vide OL process (Lei *et al.*, 2000). Hence, TL is vital and enhances OL (Jokar *et al.*, 2012; Malik *et al.*, 2012; Sung 2012), by taking all the necessary efforts to address the constraints that inhibit learning (Wick and Leon, 1995). OL tries to set a process for professional development by acquiring capabilities that enhance sustainable competence building through innovation (Senge, 1994). Secondly, the current research examines that TL and OI have a positive relationship indirectly and directly via the process of competency construction focusing on learning to reduce internal change costs. Our results have been supported by the crucial role of TL and its effects on innovation (McDonough, 2000). It is an interesting result that supports charismatic TL as it focuses more on collective goals, decisions and capability generation of capabilities relative to transactional- based leadership (García-Morales *et al.*, 2012). Thirdly, the study empirically shows OL and OI are positively related. An innovative organization continues to learn and commit to remaining competent. Through learning, the organization is capable of changing its behavior, adjust and rediscover its production and technological processes to prevent downturns and enhance OI. Organizations are at different levels of learning evolution. OL uplifts organizations out of stagnation and enhances continuous innovation (Glynn, 1996). Fourthly, the study examines empirically OL and innovation and OP positive relationship. Organizational complexities of vital technology and production capacities and competences enhance continued competitive advantages. Organizations must assess all their technological and administration resources to support higher competitive position in the market. In the competitive business environment, the organization needs to develop special capabilities and key competence levels to address the challenges in technology and administration.

SEM recently been employed widely in different fields including knowledge management (Nejatian *et al.*, 2011; Hui *et al.*, 2013b) organizational learning (Hui *et al.*, 2013a), total quality management (Vranakis and Chatzoglou, 2011), Enterprise resource planning (Qutaishat *et al.*, 2012), supply chain management (Jenatabadi *et al.*, 2013; Ruteri 2009; Deshpande, 2012), and

airline performance modeling (Jenatabadi 2013a, Jenatabadi 2013b). This article concentrates on sample Asian food manufacturing industry which acts in a setting where the empirical studies are not sufficient. By examining the links within the same model between TL, OL, and OI, and by applying broad measures of all of the relationships together in food industry.

### **Limitation of the study**

Although the common method variance is not identified by Harman's one-factor test and other tests as a problem, the bias still exist (Podsakoff and Organ, 1986). While Spector (2006) oppose the use of single method as it is subject to systematic bias, several research works urge that future study can use different ways of measuring dependent and independent variables from broader sources of data to limit the bias response influence (Podsakoff *et al.*, 2003). Moreover, the data of the study is cross-sectional, affecting the assessment of the variables in this research. Thus, it is important as some variables are dynamic in nature. Although the researchers test many possible results and directions of the research model, only longitudinal study is able to examine the pathways of causality relationship and identify possible reciprocal processes. The researchers made efforts to reduce this effect by focusing on theoretical analysis in rationalizing the relationships and incorporating key considerations in measuring variables (Hair *et al.*, 1998).

### **Future study**

Future researches may also investigate other possible results of introducing innovation and learning systems in organizations (e.g. staff satisfaction, quality control and enhancing capacity). The geographical homogeneity issues assessed in this study minimizes the impact of external factors, however, future study may incorporate the explicit effect of external forces (Aragon-Correa and Sharma, 2003).

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