Organisational Culture in Public Universities: Empirical Evidence

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ABSTRACT

Manuscript type: Research paper

Research aims: This study aims to investigate organisational culture (OC) of public universities from the perspective of academic leadership. It examines the impact of organisational culture on transformational leadership.

Design/Methodology/Approach: The Organisational Culture Assessment Instrument (OCAI) and The Multifactor Leadership Questionnaire (MLQ5x) are used as proxies for the variables tested. Data are collected from academic leaders attached to 18 public universities in Malaysia. Analysis is done using structural equation modelling (SEM).

Research findings: The results suggest that academic leaders view the clan culture as the dominant workplace culture type. The clan culture is also the most prominent across the OC dimensions except for the dominant characteristics dimension, where the market culture is more distinct. The results also reveal that the effect of organisational culture on transformational leadership is significant.

Theoretical contributions: This study fills the void in literature by showing how organisational culture is impacting transformational leadership within the education setting of developing countries. Since it is likely that different kinds of leadership behaviours are associated with different organisational cultures, it is also likely that the same may affect the Malaysian educational setting.

Practitioner/Policy implications: The findings of this study are expected to facilitate the educational administrators in fine-tuning leadership behaviours through organisational culture. A match between

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these two dimensions should make the organisations more effective, thereby enabling administrators to improve the selection process of leaders and their future developments.

Keywords: Organisational Culture, Malaysia, Leadership, Public Universities
JEL Classification: M14

1. Introduction

Malaysia's aspiration to become a highly-developed nation, and in particular, as the education hub for international education, has led to the growing interest of research examining leadership roles within the Malaysian Higher Education (MHE) institutions. Unlike previously, universities today are expected to produce highly skilled graduates and high quality research, in their effort to address the demands of the 'knowledge economy', created by the recent and rapid technological advances (Deem, Hillyard, & Reed, 2007; Thorp & Goldstein, 2013). With the increase in student enrolment, marketisation, internalisation, higher tuition fees and of late, limited research funding, leadership development within universities has been under a lot of scrutiny. In this climate of change, the MHE institutions have had to consider ways to develop their leaders, and also the appropriate measures to apply in order to adopt the most suitable leadership behaviour for the respective institutions. Under the 2015-2025 Educational Plan, leadership development has been emphasised as a career pathway for academics; it is seen as a strategy to develop the country's academic leadership talents (Ministry of Higher Education, 2015). This situation has encouraged the leaders in MHE institutions to examine how they can lead their organisations better, and to find the best approaches which fit into the context of their organisations. The success seen in today's business environment could not have been achieved without the roles played by effective leadership for without great leaders, organisations would not have been able to accomplish their organisational goals. Despite this being so, scholars in the field of leadership management have noted that this process is not straightforward because there is no clear consensus on what great leadership practices involve (Northouse, 2012).

Within the literature of leadership management, the concept of transformational leadership (TL) in higher education, has received much attention (Cameron & Ulrich, 1986; Black, 2015; Eckel & Kezar,

2003; Hattie, 2015). Various studies (e.g., Ghasabeh, Soosay, & Reaiche, 2015) have highlighted that transformational leadership can enhance organisation performance since it facilitates in empowering human resources and in enabling change. Transformational leadership is a type of leadership which instils major changes at the organisational level; it facilitates organisational innovation and learning (MacKenzie, Podsakoff, & Rich 2001; Rowold & Rohmann, 2009; Hartnell, Kinicki, Lambert, Fugate, & Doyle Corner, 2016). While there are some cumulative evidence relating transformational leadership with individual and organisational performance, research on this area has not been fully exploited. Some scholars (Berglund, 2014; Gharibvand, 2012) argued that the dynamics of leadership, as an important source of insight to understand organisational culture, has not been explored. It was asserted that organisational culture includes the values and the assumptions of the members on what is right, good and important; it was also emphasised that all of these have a powerful effect on the leadership style. The importance of organisational culture for leaders had been highlighted by Foster (2000), who explored servant leadership. It was found that effective servant leaders need to be supported by an organisational culture. Other studies (Kennedy & Mansor, 2000; Zagorsek, Jaklic, & Stough 2004) have uncovered the positive relationship between cross-culture and leadership. In a much earlier study, Schein (1993) highlighted that leaders were unable to function effectively because of their inability to analyse and evaluate the organisation culture appropriately. On a broader level, scholars such as Hofstede (1980) reported that there were marked differences in organisational culture between countries and continents. Given these arguments, it is therefore imperative to investigate the impact of organisational culture on transformational leadership, particularly among the higher educational institutions in Malaysia. Moreover, the evolution of transformational leadership as a means to drive the performance of organisations has also sparked interests within the Ministry of Higher Education, Malaysia. This is not surprising, as there is an immense acknowledgement of transformational leadership as the means for inspiring followers to transcend beyond self-interest, thereby converting them into leaders (Northouse, 2012). Based on this, it would seem that if academic leadership and its cultural context are not attended to adequately, the university's role to serve the society, community and industry would be very much questioned. In line with this, the current study aims to explore how organisational culture (OC)

in public universities affect transformational academic leadership. For this purpose, the framework of Cameron and Quinn (1999) is applied.

This paper comprises six sections. Section 2 highlights the literature reviewed and discusses the hypotheses development. Section 3 explains the methodologies employed. Section 4 presents and discusses the research findings and Section 5 concludes the study by discussing the implications and limitations of this study.

2. Literature Review and Hypotheses Development

2.1 Transformational Leadership

Transformational leadership is described as a type of leadership style that widens and enhances employees' goals, helping them to gain confidence and to function beyond their expectations (Dvir, Eden, Avolio, & Shamir, 2002). As illustrated by Bass (1985), transformational leaders hold good visions, good rhetorical skills and impressive management skills, all of which can be used to develop strong bonds with subordinates. Considering that subordinates' activities are influenced by their leaders who direct, evaluate and provide the resources, it is important for leaders to exert this type of leadership as a channel to meet organisational goals and strategies (Gupta & Singh, 2014). Since transformational leaders are viewed as people who intend to develop their employees' full potential and to provide them with the motivation and needs, it can be deduced that transformational leaders also influence the employees' trust and satisfaction. Therefore, employees who worked under transformational leaders may be motivated to work harder, looking beyond their self-interests to achieve organisational goals.

In the literature, transformational leadership has been observed to be potentially effective across a variety of organisations and contextual settings (Ahmad, Abbas, Latif, & Rasheed, 2014; Eisenbeiss, van Knippenberg, & Boerner, 2008; Gong, Huang, & Farh, 2009; Nemanich & Keller, 2007; Wang & Howell, 2010). For example, Alén, Banerjee and Gupta (2017) found that in India, salespersons' creative performance and intrinsic motivation were influenced by transformational leadership. It was noted that a trustworthy relationship that is built through having a supportive manager is necessary in order to encourage the flow of championing old ideas and innovating new ideas, within an organisation. In another study, Engelen, Gupta, Strenger and Brettel (2015) found that regardless of the national

settings, transformational behaviours were displayed through four characters, namely: articulating a vision, providing an appropriate model, having high performance expectations, and showing supportive leader behaviour. These four characters have a moderating role between the entrepreneurial orientation and firm performance, thereby strengthening relationships. This was endorsed by Ghasabeh et al. (2015) who noted that transformational leadership has emerged as an effective form of leadership which is capable of implementing changes at the organisational level. It was deduced that in the era of the globalised market, such type of leadership is indeed needed to motivate employees into stimulating new knowledge and ideas, which are then transformed into a novel approach.

While there are various literatures discussing leadership issues, it appears that the interest on transformational leadership is growing more rapidly due to its potential and its applicability in various contextual settings (Goleman, Boyatzis, & McKee, 2013; Schein, 2004; Valentine & Prater, 2011). Nonetheless, despite many empirical evidences demonstrating the impact of transformational leadership on individual growth and organisational performance, little has been done to examine the underlying factors that provoked transformational leadership (MacKenzie et al. 2001; McColl-Kennedy & Anderson, 2002; Rowold & Rohmann, 2009; Wang, Law, Hackett, Wang, & Chen, 2005). This study aims to examine how organisational culture can be the driving impetus for transformational leadership.

2.2 Organisational Culture (OC)

Literature has emphasised that one important source of insight that can depict the dynamics of any type of leadership is organisational culture (OC) (Berglund, 2014; Goleman et al., 2013; Dorfman & House, 2004; Schein, 2004). The term, organisational culture, has been considered as the 'glue' that holds the organisation together; it is also the source of an organisation's identity and distinctive competence (Masood, Dani, Burns, & Backhouse, 2006). Organisational culture is described as a learned pattern of behaviour which is shared from one generation to the next generation, such that values and assumptions are shared among the members within an organisation. An early well-known definition of organisational culture was provided by Pettigrew (1979, p. 576) who defined it as "the system of publicly and collectively accepted meanings, operating for a given group, at a given time. This system of terms, forms,

categories and images interpret a peoples' own situation to themselves". Some researchers (Schein, 2004; Sergiovanni, 1986) have also maintained that leadership and organisational culture are integral concepts; studying one without studying the other cannot be done but the main definition of organisational culture was given by Cameron and Quinn (2011). They defined organisational culture as the values, dominant leadership styles, language and symbols, procedures and routines, and definitions of success that make an organisation unique.

Leadership and organisational culture (OC) have been studied within organisations. Tierney (2008), for instance, analysed culture within and outside the organisation, by looking at beliefs, norms, rules and understanding. According to Tierney (2008), culture determines how new employees find their roles in the organisation and what they must accomplish in order to succeed, socialise and survive within the organisation. Other essentials to examine within the organisational culture are the expectations of formal and informal leaders and the understanding of who makes decisions, such as who distributes the rewards and sanctions involved in making those decisions. Tierney (2008) stressed that the elements of OC occur differently in different settings. However, how they occur, the shape they take and their importance differ among organisations. Similarly, Chhokar, Brodbeck and House (2013) stressed that different continents may have different OC. In their study, it was observed that the Southern Asia Group had scored higher on 'being humane' and 'being collectivist' as their leadership style whereas other groups scored higher on 'charismatic' and 'team-oriented' leadership style. One of the apparent characteristics of the Southern Asia Group was the integration of other cultures happening within the organisation. It was, thus deduced that the result of this integration of cultures caused people to have different beliefs. In other words, the understanding of regional culture can help in the appreciation of relationships, thereby developing cultural strength for the organisation's leadership.

Taking the concept of culture in mind, this study thus applied the competing values framework (CVF) proposed by Cameron and Quinn (1999) to identify the characteristics of organisational culture. This model is one of the most influential and most extensively used model in the research on organisational culture (Naranjo-Valencia, Jiménez-Jiménez, & Sanz-Valle, 2016). In this framework, Cameron and Quinn (2011) had categorised organisational culture into four types: adhocracy, clan, market and hierarchy. These four types of organisational cultures

were derived from two different dimensions – flexibility and discretion versus stability and control, and external focus versus internal focus and integration. Figure 1 illustrates.

According to the framework, an organisation that is dominated by the hierarchy culture will demonstrate a controlling leadership style. Here, the leader acts as a coordinator who monitors and organises the tasks. This type of culture is represented by a clear organisational structure, standardised rules and procedures, strict control and well-defined responsibilities. The hierarchy culture offers stability, which is maintained through a fixed and tight rule. The criteria of success for the hierarchy culture are based on how far the employees can perform, depending on the procedure provided. Under the hierarchy culture,
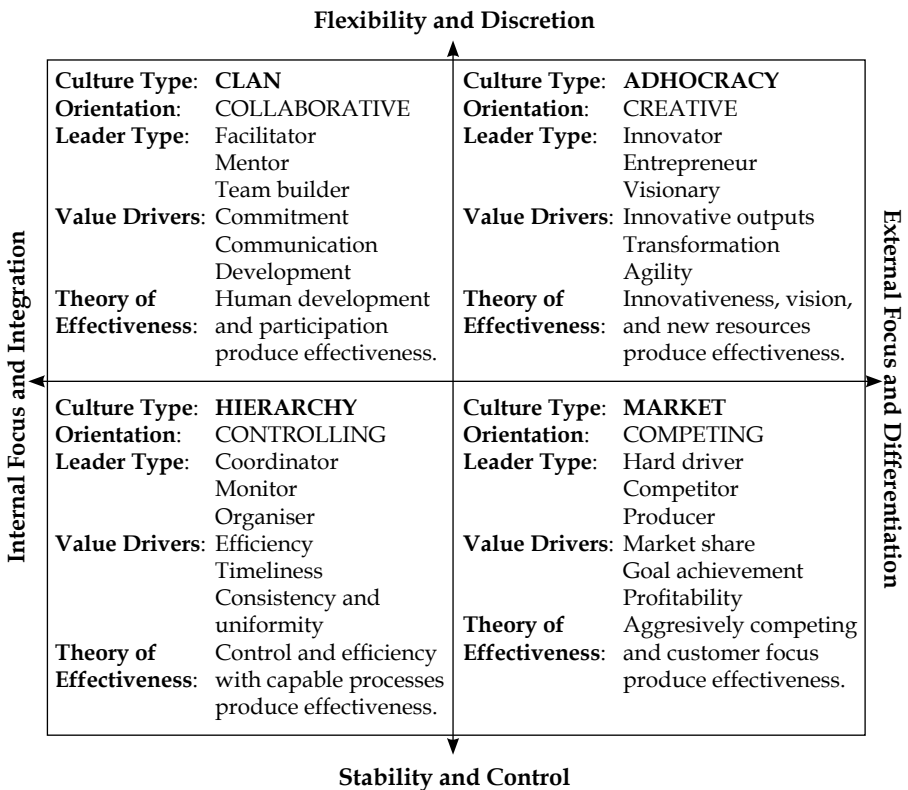
Flexibility and Discretion

Culture Type: **CLAN** **Orientation**: COLLABORATIVE **Leader Type**: Facilitator Mentor Team builder **Value Drivers**: Commitment Communication Development **Theory of Effectiveness**: Human development and participation produce effectiveness.	**Culture Type**: **ADHOCRACY** **Orientation**: CREATIVE **Leader Type**: Innovator Entrepreneur Visionary **Value Drivers**: Innovative outputs Transformation Agility **Theory of Effectiveness**: Innovativeness, vision, and new resources produce effectiveness.
Culture Type: **HIERARCHY** **Orientation**: CONTROLLING **Leader Type**: Coordinator Monitor Organiser **Value Drivers**: Efficiency Timeliness Consistency and uniformity **Theory of Effectiveness**: Control and efficiency with capable processes produce effectiveness.	**Culture Type**: **MARKET** **Orientation**: COMPETING **Leader Type**: Hard driver Competitor Producer **Value Drivers**: Market share Goal achievement Profitability **Theory of Effectiveness**: Aggressively competing and customer focus produce effectiveness.

Internal Focus and Integration (left axis label)

External Focus and Differentiation (right axis label)

Stability and Control

Figure 1: Competing Values and Organisational Theory (OCAI/CVF)
Source: Cameron & Quinn, 2011.

transformational leaders may influence employees' creativity and innovation by defining and shaping the work contexts, within which employees interact to define goals, problems and solutions (Jung, Chow, & Wu, 2003). By articulating a vision that is based on the hierarchy culture, transformational leaders can direct employees' individual and joint efforts towards innovative work processes and outcomes that are more stable, predictable and efficient. This will help to hold the organisation together. Based on these arguments, the hypothesis is formulated as:

H_1: The hierarchy culture is positively related to transformational leadership.

The second type is the market culture, which refers to a result-oriented organisation that is more concerned about getting the job done. An organisation that practices the market culture values profitability, strength in market niches, competitiveness and productivity (Hartnell, Ou, & Kinicki, 2011). Under the market culture, the leaders are hard-driven and they have high-performance expectations. Leaders who work under this culture emphasises on winning, and the achievement of measurable goals and targets (Tuan, 2010). This is also the characteristic displayed by the transformational leaders. Based on these arguments, the hypothesis is formulated as:

H_2: The market culture is positively related to transformational leadership.

The clan culture is one that resembles the family-type organisation, where companies are like extended families rather than economic entities. Different from the market culture that emphasises on profits, and the hierarchy culture that values rules and procedures, the clan-type organisation typically stresses on teamwork, employee involvement programmes and corporate commitment (Kim, 2014). Under the clan culture, employees are encouraged to voice their recommendations or suggestions as well as to participate in major tasks. The clan-type organisation culture requires leaders to act as mentors who motivate the employees into stimulating new knowledge and ideas (Hartnell et al., 2011). These are then transformed into the organisation's novelty. Based on these arguments, the hypothesis is formulated as:

H_3: The clan culture is positively related to transformational leadership.

The fourth type of organisation culture is the adhocracy culture. It is characterised by a dynamic, entrepreneurial and creative workplace. Organisations that practice the adhocracy culture emphasise on the need to be at the leading edge of new knowledge, products and/ or services (Masood et al., 2006). This type of organisational culture expects the employees to be ready for change. They also need to be open for experimentation and innovation. While the clan culture uses collaboration, the adhocracy culture adopts individual creativity. In order to succeed, leaders in the adhocracy-type organisational culture is expected to be visionary, innovative and risk oriented, where success means producing unique and authentic products and services. Based on these arguments, the hypothesis is formulated as:

H_4: The adhocracy culture is positively related to transformational leadership.

Cameron and Quinn (2011) stated that leaders tend to be more successful when their strengths are congruent with the culture of the organisations they lead. This is evidenced in a study of the Malaysian higher education institutions (Maheran, Isa, Norezam, & Abdul, 2009) which confirmed the link between OC and leadership style and decision-making quality. It was found that the hierarchy culture favoured transactional leaders who, in turn, opted for hierarchical decision-making styles. This insight, henceforth emphasises on the importance of matching leadership with culture. Another study (Ramachandran, Chong, & Ismail, 2011) found that public higher education institutions (HEIs) in Malaysia had the highest mean in the clan culture, followed by the hierarchy culture. It was revealed that the HEIs in Malaysia have moderate organisational culture and this finding was also consistent with Cameron's (1986) optimum culture for successful institutions. In the current study, the term organisational culture (OC) is used as a reference to mean the culture which reflects an enduring and an implicit set of values, beliefs and assumptions that characterise the organisation and its members.

3. Methodology

The current study is focussed on positivism, a paradigm practised in social sciences (Neuman, 2011). Positivism supports value-free science, seeks precise quantitative measures, tests causal theories with statistics, and believes in the importance of replicating studies. Positivism employs

the deductive inquiry approach (Tashakkori & Teddlie, 1998) to draw generalisable conclusions which are based on empirical evidence and theories that can be revised (Bryman & Bell, 2007; Deshpande, 1983).

The target population for this study is academic leaders in the Malaysian public universities. This study utilises proportionate stratified random sampling. This approach was used as an attempt to avoid cases where members of the population are significantly under or over represented. Once the population has been stratified into university groups, a sample of the members from each stratum/university was drawn, using simple random sampling. A sampling list was then used to obtain staff profiles which were available on the universities' websites. The estimated population in September 2015 at the time of this study, was 2,076 academic leaders who were represented by Deans, Deputy Deans, department heads, managers and directors. This study employs Krejcie and Morgan (1970) sampling formula to determine the sample size. Yet, to lessen the sampling error and to take care of any chances of potential low response rates the sample was doubled to 650, as recommended by Hair, Money, Samouel and Page (2007). To calculate the sample size from each stratum, the proportionate number was calculated by dividing the total sample size required (325) with the population size (2,076) and then multiplying that number by the population of the academic leaders in each university, so as to arrive at the sample size for each university. Following this, the sample was then randomly chosen from each university's respective proportionate sample count that was identified earlier. Prior to data collection, permission to conduct the study was requested from the management of all universities. The self-administered questionnaires were then distributed to the respondents who were given a reasonable time (one week) to complete the questionnaires before a follow up was made (Sekaran & Bougie, 2016). Following the circulation of the questionnaires, and in about one week a follow-up via telephone call was made to schedule visits with the academic leaders to obtain the completed questionnaire. Of the 650 questionnaires distributed, only a total of 333 usable questionnaires were retrieved, indicating a response rate of 51.2 per cent (Table 1).

The instrument used for the survey was adopted from the Multifactor Leadership Questionnaire (MLQ-5X Short) (Avolio, Bass, & Jung, 1999) which measured transformational leadership, and the Organisational Culture Assessment Instrument (OCAI) by Cameron and Quinn (2011), which measured organisational culture. These measures

Table 1: Demographic Profile

Demographic Variable	Frequency	Percent
Education		
Doctorate	282	84.7
Masters and others	51	15.3
Gender		
Female	126	37.8
Male	207	62.2
Age Group		
Under 40	104	31.2
Over 40	229	68.8
Ethnicity		
Malay	304	91.3
Chinese	11	3.3
Indian	13	3.9
Other	5	1.5
Position		
Dean	30	9.0
Deputy Dean	46	13.8
Head of Department	241	72.4
Director	10	3.0
Assistant Director	6	1.8

have been widely recommended by many theorists (Cameron & Quinn, 2011; Fralinger & Olson, 2007; Hair et al., 2007; Hartnell et al., 2011; Kalliath, Bluedorn, & Gillespie, 1999; Obenchain, Johnson, & Dion, 2004; Schein, 2004; Quinn & Spreitzer, 1991) due to their flexibility, practicality with large samples and good reliability. The instrument used for this study utilised a 5-point Likert-type scale, ranging from 1 (strongly disagree) to 5 (strongly agree). The number of points awarded to a specific culture type would indicate the strength where a higher score would indicate a stronger culture type. This is ultimately taken to determine the strength of the organisational culture (Cameron & Quinn, 2011). Within each organisational culture (OC) type, there are six content dimensions that would reflect the cultural values and assumptions about the way an organisation functions:

1. The dominant characteristics of what the overall organisation is like,

2. The leadership style and approach that pervades the organ-
    isation,
3. The management of employees or how they are treated and
    the conditions of the work environment,
4. The organisational glue that binds the organisation together,
5. The strategic emphases that define areas of importance to
    drive strategy,
6. The criteria of success to decide on victory and what deserves
    celebration and reward.

The Organisational Culture Assessment Instrument (OCAI) is
a validated and extensively used measure for organisational culture
(Cameron & Quinn, 2011; Fralinger & Olson, 2007; Hartnell et al., 2011;
Kalliath et al., 1999; Obenchain et al., 2004; Schein, 2004). Surveying 334
HEIs so as to identify their decision-making culture and their structure
and strategy for decision making, Cameron, Freeman and Mishra (1991)
asserted that the instrument was valid and the findings were consistent
with the values and attributes that were distinctive of each culture type
noted in the OCAI (Cameron & Quinn, 2011). In another study, Quinn
and Spreitzer (1991) surveyed 796 executives by using the OCAI. Their
results also showed that the Cronbach alpha outcomes were above 0.70
for all four culture types. The OCAI instrument had been cited for its
reliability based on the consistent patterns it produced. Studies such as
those by Muenjohn and Armstrong (2008) produced a Cronbach's alpha
of 0.86. In another study, Abbott and Bordens (2011) utilised the MLQ
measures and found that all the items were reliable and valid.

In this study, transformational leadership (TL) focusses on intrinsic
motivation and follower development. It involves an exceptional form of
influence that moves followers to accomplish more than what is usually
expected of them (Bass & Riggio, 2006). The instrument used in the
current study to measure leadership is the MLQ5x which was developed
by Bass and Avolio (2000) and the questionnaire which consists of 45
questions is anticipated to take about 15 minutes to complete. Only 20
transformational leadership items were adopted for the present study to
explore beliefs and perceptions about transformational leadership. The
other 25 items pertaining to transactional and non-transactional leader-
ship qualities were excluded. All the 20 items used were scored using
a 5-point Likert scale that ranged from 1 (not at all) to 5 (frequently, if
not always). This measure is made up of 4 dimensions: i) idealised
influence (a. behavioral and b. attributed), ii) inspirational motivation,
iii) intellectual stimulation, and iv) individualised consideration.

4. Results

4.1 Descriptive Analysis

This study performs a descriptive analysis to analyse the mean and standard deviation of the constructs used. As indicated in Table 2, the clan culture appears to be the most common organisational culture portrayed in the Malaysian higher education institutions whilst the adhocracy culture seemed to be the least practised.

Table 2: Descriptive Analysis

OC type	Mean	SD
Clan culture	3.78	1.06
Adhocracy culture	3.48	0.99
Market culture	3.55	1.03
Hierarchy culture	3.65	1.00
Transformational leadership	4.06	0.45

The phenomenon highlighting the clan culture can be inferred as one where academic leaders in Malaysian HEIs worked cooperatively; they collaborate with each other to complete their administration, consultation and research tasks. This situation is expected, given that the ministry has emphasised on collaboration practices for performing scholarly activities. In the Ministry's website, for example, the expertise of all the professors and academic staff were displayed as a means of encouraging researchers in the same field to cooperatively work with each other on projects funded by either the government agencies or external parties. This result is inline with the findings of previous empirical works (Ramachandran et al., 2011).

Although the current study has found that the market and adhocracy culture are least practised, there is evidence to show that they are quite commonly noted in private university setting (Ramachandran et al., 2011). Yet, of late, public HEIs in Malaysia are in competition with each other to attract the best students to their institutions. Many of these public HEIs are aggressively participating in education fairs and advertising programmes in the media. This situation could have been triggered by the need to raise their respective incomes since the funding allocated by the government has been slashed in recent years. In observing the adhocracy culture, the findings of this study seemed

justified. The ministry is increasing the initiative to develop students and academics to become entrepreneurs where inventions are encouraged for commercialisation. In observing the clan culture as the most dominant culture, the findings of this study seemed justified. On the one hand, the ministry is increasing the initiative to develop students and academics to become entrepreneurs, where inventions are encouraged for commercialisation. In the same way, public HEIs as a clan culture are flexible and discrete to draw on their internal strength and integrate their resources to develop their students and have them participate in entrepreneurial activities to produce effectiveness.

4.2 *Measurement Model and Structural Model Analyses*

This study employs structural equation modelling to evaluate the measurement model and the structural model. In line with Anderson and Gerbing (1988), this study performs a confirmatory factor analysis (CFA) first to assess the measurement model through examining the convergent validity and discriminant validity. The purpose is to validate the psychometric properties of the measurements. Since the constructs for transformational leadership consists of reflective measurements, we first evaluate the idealised influence (attribute), idealised influence (behaviour), inspirational motivation, intellectual simulation and individualised consideration as the first order construct for transformational leadership before assessing it as the second order construct (Hulland, 1999; Hair, Hult, Ringle, & Sarstedt, 2016). As indicated in Table 3, except for IIA1, IS1 and IC2, all the items tested have loaded significantly in the range of 0.52 to 0.87. The three items (IIA1, IS1 and IC2) are then dropped from further analysis since their factor loadings are below 0.4 (Hair et al., 2016). This process resulted in 17 transformational leadership items being available for further analysis. The results also show that the composite reliability and average variance extracted (AVE) for all the first order constructs, are above 0.7 and 0.5, respectively. This indicates that they are valid and reliable. These items are then tested for the second order construct, and all are found to meet the threshold values (factor loadings >0.4; AVE >0.5; composite reliability >0.5). These results also indicate that all the measures used for transformational leadership have satisfied the convergent validity.

Further to this, another round of confirmatory factor analysis is run for organisational culture (Table 4). The results indicate that all the items have loaded significantly, with a value of above 0.4 and all carried

Table 3: Measurement Model Results of Transformational Leadership

Constructs	Items	Standardised Loadings	AVE	Composite Reliability	Cronbach's Alpha
First-order Construct					
Idealised Influence (attribute) (IIA)	IIA2	.72	.52	.76	.53
	IIA3	.72			
	IIA4	.72			
Idealised Influence (behaviour) (IIB)	IIB1	.56	.51	.81	.68
	IIB2	.81			
	IIB3	.70			
	IIB4	.76			
Inspirational Motivation (IM)	IM1	.66	.58	.85	.76
	IM2	.80			
	IM3	.80			
	IM4	.77			
Intellectual Stimulation (IS)	IS2	.67	.60	.81	.66
	IS3	.81			
	IS4	.83			
Individualised Consideration (IC)	IC1	.52	.52	.76	.52
	IC3	.72			
	IC4	.87			
Second-order Construct					
Transformational Leadership	IIA	.72	.65	.91	.89
	IIB	.85			
	IM	.89			
	IS	.81			
	IC	.79			

Note: IIA1, IS2 and IC2 factors' loadings which are not shown are below 0.4, and they are not included in further analysis.

the composite reliability values of 0.87 to 0.9 and the AVE values are above 0.53. These results also indicate that all the measures used for organisational culture satisfied the convergent validity. Apart from the convergent validity, these measures are also tested for discriminant validity, following the heterotrait-monotrait ratio (HTMT). As indicated in Table 5, the HTMT values for all the constructs appeared are below 0.9, indicating adequate discriminant validity (Henseler, Ringle, & Sarstedt, 2015).

Table 4: Measurement Model Results of Organizational Culture

Constructs	Items	Standardised Loadings	AVE	Composite Reliability	Cronbach's Alpha
Clan	DC1	.40	.61	.90	.86
	ME1	.86			
	OG1	.82			
	OL1	.81			
	SC1	.84			
	SE1	.86			
Adhocracy	DC2	.59	.56	.88	.84
	ME2	.69			
	OG2	.76			
	OL2	.80			
	SC2	.77			
	SE2	.81			
Market	DC3	.62	.53	.87	.82
	ME3	.82			
	OG3	.78			
	OL3	.58			
	SC3	.73			
	SE3	.82			
Hierarchy	DC4	.56	.57	.89	.84
	ME4	.77			
	OG4	.74			
	OL4	.78			
	SC4	.80			
	SE4	.84			

Table 5: HTMT OC Dimensions Results

	CLAN	ADHOC.	MKT.	HIERA.	TL
CLAN					
ADHOC.	0.73				
MKT.	0.86	0.74			
HIERA.	0.71	0.89	0.87		
TL	0.31	0.27	0.28	0.32	

Assuming that all the constructs used are valid and reliable, a structural model is then constructed to test the hypotheses. The structural model is evaluated by investigating the path coefficients (β) and coefficient of determination (r squared) and effect sizes f and Q squared. The hypotheses testing is then carried out using the bootstrapping technique to measure the t values and p values so as to examine the construct relationships.

The predictive relevance of a model is its ability to accurately predict the items' data of the dependent variables (Hair et al., 2016). In this study, the SmartPLS's blindfolding process is used to estimate the Q^2 effect size. With the current model, the Q^2 value is noted to be at 0.21. The positive Q^2 value shows that the model has predictive validity. A value of above 0.15 further indicates that the exogenous construct has a medium, predictive relevance for the endogenous construct (Hair et al., 2016). In the next step, we assess the path coefficients' significance through bootstrapping computations. The bootstrapping process is used to determine the significance of path coefficients by calculating the empirical t values, which, if larger than the critical value (t distribution values), then the coefficient is considered significant, with a certain probability of error. The most commonly employed critical values for single tailed tests are noted as 1.65 (significance level = 10%), 1.96 (significance level = 5%), and 2.57 (significance level = 1%) (Hair et al., 2016). Table 6 further illustrates.

Table 6: Results of Hypothesis Testing

Hypo-theses	Relationships	Path Co-efficients(β)	t Values	Results
H_1	Clan culture → trans-formational leadership	.37	6.64***	Supported
H_2	Adhocracy culture → trans-formational leadership	.35	5.90***	Supported
H_3	Market culture → trans-formational leadership	.32	6.32***	Supported
H_4	Hierarchy culture → trans-formational leadership	.69	21.35***	Supported

Note: ***Significant at 0.01 (1-tailed), **significant at 0.05 (1-tailed), *significant at 0.10 (1-tailed).

The R^2 of this model is 0.39, indicating that the variables contributed about 39 per cent of the variance in transformational leadership. As indicated in Table 6, clan culture (β = 0.37, t = 6.64, p<0.01), adhocracy culture (β = 0.35, t = 5.90, p<0.01), market culture (β = 0.32, t = 6.32, p<0.01), and hierarchy culture (β = 0.69, t = 21.35, p<0.01), are all significantly related to transformational leadership. Hence, H_1, H_2, H_3, and H_4 are supported.

5. Discussion

This study contributes to existing literature by demonstrating the type of organisational culture that is prevalent in the context of Malaysian HEIs. This shows how the different organisational culture can impact on transformational leadership behaviours. The findings of this study also support the findings of previous empirical works such as those conducted by Ramachandran et al. (2011) where it was noted that the clan culture served as the dominant organisational culture type. As a developing country, Malaysia is also characterised by the collectivistic norm of behaviour, where people do not want to be isolated from the societal group, with many preferring to follow the opinion of others. As a result of this culture, it was thus not surprising that the clan culture predominated as the organisational culture type in public Malaysian HEIs. This finding thus indicates that employees in public Malaysian HEIs viewed the universities as a friendly working place, like an extended family working together towards achieving organisational goals. There is a high possibility that the same individuals would not perform a particular action if others do not agree with it. In this regard, it is also important to note that the clan culture also promotes a higher level of loyalty, morale, commitment, tradition, collaboration, teamwork and participation. Consequently, the clan culture would also lead to long-term benefits for the development of human resource. The current findings are consistent with the study of Berrio (2003) and Ferreira and Hill (2008). Their studies had noted that two-thirds of the American colleges and universities also practised the clan culture. Herein, it is also important to mention that although the clan culture appeared to be the most dominant in Malaysian HEIs, other types of culture had also been detected within the university settings, but these were only moderately prevalent. Overall, it can be deduced that the Malaysian public universities are in a good position to face change in management initiatives, in response to the dynamic changes happening within the

turbulent global environment. The practice of the moderate culture will help universities to maintain the creativity and innovativeness of their employees whilst also sustaining some form of structure (Cameron & Quinn, 2011). The practice of the moderate culture will also make employees more receptive to the different ideas generated and others' innovative ways of thinking. This study had also found that the adhocracy culture and the market culture were being gradually developed for the local university settings. Considering that all the universities are facing challenges in meeting the country's aspiration of being the educational hub for international education, the limited funding allocated by the government and the aspiration to be ranked well above other universities in the world, academic leaders throughout all the public universities are also trying to promote these two types of cultures. The reason is because implementing them into the university setting would help the universities concerned to attract more external funding and to find innovative ways of generating their own income so as to sustain their ranking and competitiveness.

In discussing the impact of these four types of organisational culture on transformational leadership, this study has also found that universities displaying the characteristics reminiscent of the four cultures proposed above, also seemed to have a positive relationship with transformational leadership. This result, therefore suggests that transformational leadership is equally affected by these four types of culture. Based on this, it can be inferred that transformational leaders prefer to create a working environment that are characterised by formal rules and procedures, long-term goals and targets, collaborations and also innovativeness. In comparing the impact of the four types of culture on transformational leadership, it seemed evident that even though the clan culture is most dominant in Malaysian HEIs, its impact on transformational leadership appeared to be lesser than the hierarchy culture (Table 7). This raises the question of why the hierarchy culture had the most impact on leadership. The answer is traced to the fact that the hierarchy culture carries more concerns for stability and control; the hierarchy culture leaders are rule reinforcers who like to control. In contrast, the clan culture is characterised by flexibility and discretion and the clan culture leaders are warm and supportive, hence they would emphasise on collaborations. This phenomenon possibly occurred be-cause as educational institutions, the Malaysian HEIs are bounded by structures and procedures imposed by formal rules and policies. As a result, there is a need for the academic leaders to maintain a consistent

Table 7: Culture Impact and Dominance Comparison

OC Type	Dominant Culture Type	Impact on TL
Clan Culture	1	2
Adhocracy Culture	4	4
Market Culture	3	3
Hierarchy Culture	2	1

standard that is parallel to the requirement imposed by the Malaysian Qualifications Framework (MQF). In this regard, the MQF served as the basis for measuring the quality assurance of higher education. The MQF, thus acts as the document containing the criteria and standards that measure the national qualifications of the HEIs. These are then used to generate graduates of eminence. Thus, although transformational leaders acted as the inspirational figures who motivated their subordinates through idea-generating and idea-promoting behaviours, all these factors, need to be aligned with the standards and procedures of quality assurance in Malaysia. A comparison showing the similarities of the hierarchy culture and the clan cultures explains why the hierarchy culture has the most impact on leadership. Clan and hierarchy are internally focussed, that is, all the universities' main value orientations are intended towards the individuals who work within the limits of the organisation. The other two cultures (adhocracy and market), in contrast, are externally focussed. These two cultures value connections with external actors. With the transformational leadership's primary focus being the well-being of followers and their emotions, it is thus more perceivable why the hierarchy culture would have a larger impact on transformational leadership. There are scholars such as Masood et al. (2006) who suggested that transformational leaders are more willing to work in an adhocratic or clan type culture rather than the hierarchical or market type culture. Nonetheless, the situation in the Malaysian universities is different.

The implications of the current study are realised in its empirical contributions. The results of this study are anticipated to contribute to the body of knowledge by supplementing previous findings. The results demonstrate how the relationships between the variables might be different in the context of university settings in a developing country. The outcome generated by the present study challenges earlier conclusions which stated that government organisations under-

emphasise market cultures (Ferreira & Hill, 2008; Parker & Bradley, 2000; Wilkinson & Yussof, 2005). The importance of the market culture, as demonstrated in this study, is not avoidable since all the public universities are aggressively competing with each other to attract the best resources, students and faculty. This occurrence has forced the university leadership to adopt a more active and entrepreneurial approach, focussing more on innovation and growth. The higher mean score for the clan culture as shown in this study, hereby also validated prior studies (Berrio, 2003; Smart & Hamm, 1993; Smart & St. John, 1996; Ramachandran et al., 2011) which had highlighted the role of collaboration occurring between academics in research and other scholarly activities. Despite the belief that transformational leaders are more willing to work in an adhocracy culture or the clan culture, as compared to the hierarchy culture or market culture, this study indicates quite clearly that it is not applicable to all industries.

The outcome generated by this study carries implications for universities that are in the process of developing transformational leadership. Here, the empirical results indicate that organisational culture can affect transformational leaders but in order to create more transformational leaders, universities should be aware of the impact of the different types of organisational culture on leadership. In this regard, more efforts should be invested in promoting and transforming the desired organisational culture which is geared for transformational leadership. Since transformational leaders are viewed as people who can develop the employees' full potentials while also motivating them towards greater positive changes that would benefit the organisation, it cannot be denied that transformational leaders are important.

6.   Conclusions, Implications and Suggestions for Future Research

The current study explains some important elements of organisational culture which are related to leadership in public universities. The outcome generated from this study can help managers and consultants to incorporate more organisational culture and leadership into their framework as predictors in their succession and selection processes as well as for improving leadership and organisational effectiveness. Many believe in the elusive and hereditary nature of leadership, but what if we can single out what can be learned and bring closer those very valuable leadership skills? The end goal would be the added knowledge of how mutual leadership is impacted by culture. This will then show others

what needs to be done to develop leaders who are critical for influencing their teams and individuals into achieving higher goals and achieving excellent organisation performance.

Even though the current study has a reasonably large number of respondents (n = 333), it is also constrained by the background of the respondents who are from the academic background with only 18 public universities. This number is considered small since there are 672 higher education institutions in Malaysia. In other words, the outcome may not be applicable to other professions. In addition, this study is conducted over a period of five months and it is also cross-sectional in nature due to the limited resources and time. This implies that there could be an oversight in the in-depth observation of the variables. Had there been an extended period of time, a more profound understanding of the cause and effect of the complex relationships could have been generated.

There are some suggestions for future research based on the findings of the current study. Organisational culture is found to have a positive and significant relationship with transformational leadership. Studying OC and other antecedents to servant leadership is suggested since research shows that servant leadership is more predominant and effective in the Southeast Asian culture (Zhang, Lin, & Fong Foo, 2012). This is traced to the study done by Zhang et al. (2012) who had revealed that Singaporeans tend to draw leaders to the back of the group, unlike their US counterparts who tend to draw them to the front of the group. This practice of the Singaporeans suggests a prototype leader who gathers the group's opinions and then unifies them from the back. The current research model is able to explain about 39 per cent of the total variance in leadership. Other latent variables are able to explain the remaining variance inclusive of personality, emotional expression and sensitivity. Also, the inclusion of team or firm performance, leadership effectiveness and emergence variables as well as control variables, such as ability and personality, would give future research more rigour, depth and breadth, especially if it includes a comparison of leaders, administrative personnel and faculty members of both the private and public HEIs in Malaysia. Future research could also examine the organisational culture types with related leadership behaviour among different generational groups. This can encompass baby boomers, generation X and generation Y subjects. This is because the younger age groups have been known to display different values, work ethics and technological inclinations, as a result of varying societal exposure to extremely different and changing circumstances, in the past seventy

years or so. As suggested by Hair et al. (2007), longitudinal studies are a better way to understand the cause and effect relationship among variables at different periods. Thus, future research may consider studying the outcomes of OC types on organisations and gauging their effectiveness by bearing in mind current theoretical findings and the practical needs in various sectors. Finally, future studies can examine organisational culture and leadership by using the qualitative research approach as a strategy to understand the complexity of leaders' understanding. This can be done by conducting a deep analysis of the variables and contexts. The reason is because it is an alternative way of conducting research as another means to understand the academic leaders' unique environment.

The benefits of measuring organisational culture are numerous. For one, people become aware of the current and the preferred culture in public universities. These questions can generate momentum for change. Further, the OCAI assessment is just the first intervention used to initiate change. Practical implications of the current findings can be made from an increased understanding of the OC types as predictors of leadership. This can be combined by HR consultants with the skills approach for developing a comprehensive leadership development programme that pools work experiences with classroom training efforts. Through work experience and training programmes, leaders can acquire improved problem-solving techniques and in that regard, become more effective at influencing others in the attainment of goals. Therefore, when the results of the current study are pooled in the skills approach, they would offer a structure that can frame the content of leadership education and development programmes.

Overall, the current study has noted the positive and significant predictive relationship between organisational culture and culture types, with transformational leadership. It is noted that leaders in public universities in Malaysia perceive the current organisational culture as the clan type, followed by the hierarchy type, as is reminiscent of past studies. Firstly, this study has also developed the research conceptual framework which was based on the literature reviewed. Its main contribution is in verifying previous findings related to leadership and culture by uniquely using valuable and well-known instruments (OCAI and MLQ5x) on a representative population. Specifically, the study has identified that few empirical studies had examined the interaction of culture and leadership. To complete this, the current study also used the viewpoints of the leaders rather than the followers. This had not been

done before in previous studies. Secondly, this study has also improved our understanding of the social system's theory by refining the theoretical rationale for existing linkages and for specifying aspects of culture that impact on leadership and vice versa (Ladik & Stewart, 2008; Summers, 2001). Thirdly, this study has also applied remedies to the common method variance by applying the anonymity of respondents for reducing the evaluation apprehension. This study has also used a large sample size than most studies. The instrument used has also obtained a relatively higher construct reliability and it also uses several institutions instead of only a handful. Finally, the findings of this study show that leaders' behaviour are felt throughout the organisation when they impacted the norms that either sanctioned or discouraged member behaviours and decision making. Moreover, their patterns of behaviour and interaction among members are also noted (Giberson et al., 2009). The implications of this is that the decision-makers' optimal planning for culture and their leadership are in harmony with the strategic organisational effectiveness. It acts as guidelines for formulating plans for the attainment of organisational goals and vision. It also helps practitioners to improve the selection and development of leaders. Another important implication gained from the current study is the improved understanding of culture and leadership. This means that organisations can use the OCAI and MLQ5x periodically to greatly improve their understanding of culture and leadership. Based on this, they can then opt for the leadership styles and cultures that support the achievement of the sought after organisational effectiveness.

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