

The moderating impact of national culture on the relationship between knowledge sharing and organisational effectiveness: The case of Iran's private sector organisations

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Abstract

This paper investigates the relationship between knowledge sharing and organisational effectiveness, as well as testing for the possible moderating impact of national culture. Data for this paper was collected through the use of self-administered questionnaires. The results are based on responses from 357 managers of private sector organisations in Iran. To assess knowledge sharing, the researcher used the scale from Zheng, et al. (2009) and to investigate national culture and organisational effectiveness the scale from Nazarian (2013) was used. The regression analysis shows a significant relationship between knowledge sharing and organisational effectiveness; however, the moderating effect of national culture showed significant impact with the uncertainty avoidance dimension only. However, if national culture is taken as a single component in the regression analysis, a significant moderating correlation is evident.

Keywords: National Culture, Knowledge Sharing, Organisational Effectiveness, Iran, Private Sector

Introduction

Knowledge, culture, structure, power and politics are among the characteristics that are responsible for the success of an organisation (Zheng, et al., 2009; Barney, 1991). There are many studies in the literature identifying what these characteristics are and in what way they affect organisational performance (Pettigrew, 1979). These features represent the environment within an organisation where organisational activities take place. There are many studies that examine the relationship between these factors and organisational performance (Nazarian, 2013; Zheng, et al., 2009; Daft, 1995; Robbins, 1990), however what is missing from the literature, is an explanation of some of these intervening factors that can impact organisational performance due to different cultural values.

Knowledge

Knowledge is now recognised as one of the most significant strategic resources within an organisation, and finding the best way to manage it is vital to an organisation's success and can have a significant impact on organisational effectiveness (Zheng, et al., 2009). According to Argote and Ingram (2000) it is the knowledge of the organisation that is largely responsible for its performance. There have been many studies that have pointed out the significant association between knowledge and organisational effectiveness. For instance, among the significant factors that contribute to enhanced organisational performance are

knowledge creation, sharing and utilisation (Zheng, et al., 2009; McEvily and Chakravarthy, 2002; Epple, et al., 1996; Darr, et al., 1995). If organisations are to invest in managing knowledge, they need to have a good understanding of how knowledge is created, shared, and utilised within the organisation.

Organisational Effectiveness

Organisational effectiveness can be expressed as the “the degree to which an organisation realises its goals” (Daft, 1995, p. 98). Competition in the complex modern business environment requires companies to increase their effectiveness in almost all areas of their organisations such as productivity, knowledge management, mergers and acquisitions, change management process and core values (Nazarian, 2013; Brown & Duguid, 2000). Capabilities of employees, skills and knowledge are key factors to business success and can result in development of employee skills resulting organisational effectiveness (Nazarian, 2013; Berson & Linton, 2005).

National Culture

National culture is another significant factor that can have an effect on the association between knowledge and organisational success. This is due to cultural values being part of employees’ everyday lives where the learning of these values starts from early childhood. Likewise, employees’ behaviour, communication and actions are formed by these cultural norms. For example, according to Hofstede, employees’ behaviour at work builds upon behaviour learned earlier in life (Nazarian, et al., 2013; Hofstede, 1991).

Iran’s National Culture

Iran is an ancient country located in southwest Asia with around 6000 years of uninterrupted written history. It borders the Caspian Sea in the North, the Persian Gulf and the Oman sea in the South. Its neighbouring countries are Iraq, Turkey, Afghanistan, Turkmenistan and Pakistan. Iran’s population is now somewhere around 80 million (Worldometers, 2017) which has nearly doubled since the Islamic revolution in 1979 (Nazarian, 2012).

Iran is categorised in Hofstede’s model of national culture with Turkey and Greece in the near eastern cluster. Based on his findings, Iran scored high on the ‘collectivistic’ dimension, signifying good team work and cooperation within groups. Taking into account that Iran has been under Islamic principles and ideologies for more than thirty years with authority, conformity and goodness within the workplace making the results predictable. However, Tayeb (1979) argues that Iran might be better positioned in the ‘individualistic’ category instead of ‘collectivistic’ as team and group work does not usually fit well with Iranian culture. Individualistic workers tend to only share information with people within their circle of trust, such as family and friends thus reducing the knowledge sharing potential of knowledge management within the organisation. Ali (1996) instead, included Iran in the Middle Eastern cluster assuming that Iranians are likely to have some shared cultural aspects with Arab countries, and his findings are confirming Tayeb’s argument, concluding that Middle Eastern countries are likely to be more individualistic. Ali and Amirshahi (2002) as well as Javidan and Dastmalchian (2003) also concurred this conclusion. On the other hand, Namazie (2003) used Hofstede’s model to re-examine the case of Iran, he concluded that Iran’s national culture on three dimensions of power distance, individualism and masculinity is becoming closer to western culture. This can be explained by what is called the ‘cultural revolution’ which is the result of the Islamic revolution and eight years of war with Iraq that has affected many aspects of the Iranian national culture (Sadri & Sadri, 2008). National culture impacts cultural values, which as a result affects individual and group needs, attitudes, and norms that consequently affect organisational effectiveness (Nazarian, 2013).

This paper addresses how national culture, in the form of Hofstede’s four dimensions, can have a moderating impact on the way knowledge is shared within the organisation and the effectiveness of that organisation. There is a number of studies relating these variables to

each other; however, these studies are mainly focused on the direct relationships between these factors and not on the possible intervening relationships (Nazarian & Atkinson, 2013). The aim of this paper is to broaden our knowledge of whether cultural values can have an impact on how employees share knowledge with their counterparts in the organisation and whether this can have an ultimate impact on the effectiveness of the organisation that they operate in.

Literature Review

Organisational Effectiveness

In the existing literature, different approaches to analysing organisational effectiveness have been introduced whereas in this research four of the most common approaches are discussed.

- Goal attainment, is the most contentious approach to organisational effectiveness and it categorises organisations as single entities that are set to achieve specific goals (Lusthaus, et al., 2002). Hence organisational effectiveness can be viewed in terms of business performance and objectives. But, this approach is widely criticised, such as by Hofstede (2001) who argues that goals should be used as standards to evaluate organisational effectiveness.
- Systems resource, looks at the organisation as an open system (Maiga & Jacobs, 2003), assuming that the organisation is made up of related systems that use inputs to engage in a process to transform and produce outputs. This approach tests various variables such as environmental indicators and relations, organisational effectiveness, employee satisfaction and conflict levels in different sections of the organisation (Minor, et al., 2001).
- Strategic constituencies, views organisations as different constituencies with different degrees of power (Steensman & Corley, 2000). Hence, the degree by which the management of the firm is satisfied by forecasts measures effectiveness. Weber and Manning (2001) suggests that for a company to survive, it is vital to analyse and check the constituencies that can cause risk to the progress of the organisation.
- Competing Values Framework (CVF) is based on the assumption that people working in the organisation are likely to have different values, interests and preferences, hence the low possibility of developing shared values about which goals to give preference (Yeung, et al., 1999). It also assumes that no single factor is known that can be used to calculate organisational effectiveness (Wenger & Snyder, 2000). Three criteria to create basic sets of competing values have been suggested by Salzainna (2004): flexibility versus control, people versus the organisation, and means versus ends.

Organisational Effectiveness Using the Competing Values Framework

The competing values framework can be defined in terms of the following conditions: market share and effective acquisition of resources (Dixon, 1992), achievement of targets and organisational goals (Heffernan & Flood, 2000), promoting employee performance through employee satisfaction to maximise profits (Kellogg, et al., 2006), use of technical efficiency and economics to maximise returns (Kaplan & Norton, 2001) as well as the firm's ability to meet demand (Chenhall, 2005). One significant assumption that this framework is based on is the effectiveness of the organisation being conditional upon the organisation's ability to reach its desired outcome in every cultural type. If this is the case, then it can be concluded that the organisation is performing effectively (Christensen & Overdorf, 2000). The competing values framework also looks at effectiveness from the stakeholder's view, as the organisation cannot accomplish effectiveness without stakeholders satisfaction (Fedor, et al., 2001).

Organisational Knowledge

In recent literature, the notion of organisational knowledge has achieved a lot of attention (Alvesson & Karreman, 2001), and is known as one of the most significant assets that any organisation can have (Ipe, 2003; Nahapiet & Ghoshal, 1998; Spender & Grant, 1996). Regardless of the fact that knowledge has always been a major element in organisations, only in the last few years it has been recognised as the predominant source of organisational

success (Stewart, 1997) and essential to any organisations' success and long-term sustainability (Nonaka & Takeuchi, 1995). Recognising knowledge as the main resource in organisations asserts the need for managing processes in away that smooths the creation, sharing, and the leverage of knowledge in the organisations (Ipe, 2003; Becerra-Fernandez & Sabherwal, 2001; Drucker, 1993). Many organisations are now seeking to set up and practice effective knowledge management systems to more effectively manage the knowledge that they possess, and a large number of studies have discussed this and pointed out the significance of knowledge in organisations (Ipe, 2003; Grover & Davenport, 2001; Tsoukas & Vladimirou, 2001). There are a large number of knowledge management process models that have been introduced by scholars. The framework that has received the most approval consists of three dimensions of knowledge generation, sharing, and utilisation (Zheng, et al. 2009; Davenport and Prusak, 1998). Knowledge exists at all organisation levels; however, this research is centred on knowledge at an individual level as well as the elements that are likely to have an impact on the knowledge sharing process (Ipe, 2003).

Knowledge Sharing in Organisations

Organisations are highly dependent on their employees in order to effectively leverage knowledge because employees are the ones who actually create, share, and use knowledge (Ipe, 2003). Being able to leverage knowledge is only possible when employees can freely share it between themselves and their counterparts. So knowledge sharing can be defined as the process of making knowledge widely accessible within the organisation. This process is complete when knowledge held by an employee is transformed into a form that can be recognised, integrated, and utilised by others in the organisation. This process requires a conscious action on the part of the individual who has this knowledge to be able to make it available for use by others. This also means that the source does not hand over the ownership of the knowledge but instead, knowledge is jointly owned between the parties. Sharing is a voluntary act and is not the same as reporting which entails the exchange of facts based on structured formats and procedures (Davenport, 1997).

In knowledge sharing, an employee takes part in the knowledge exchange even though there is no obligation to do so. In other words, knowledge sharing suggests an association between at least two individuals of which one individual is in possession of the knowledge and the other acquires it (Hendriks, 1999). There is a difference between knowledge sharing and the notion of knowledge transfer which is mainly used to describe the movement of knowledge between different departments within the organisation or among organisations (Chakravarthy, et al., 1999; Lam, 1997). Another reason why sharing knowledge is critical is due to it providing a link between the individual and the organisation by facilitating the transfer of knowledge from the individual level to the organisational level, where it is then transformed into competitive advantage for the organisation (Hendriks, 1999). Knowledge sharing can also result in the flow of new and fresh ideas and is linked to creativity and innovation in organisations (Armbrecht, et al., 2001). It has been shown that a lack of knowledge sharing can be a major barrier to effectively managing organisations (Davenport & Prusak, 1998; Hendriks, 1999).

According to Nonaka and Takeuchi (1995) knowledge in an organisation should be looked at as a corporate advantage and the way it is created and shared should be cultivated as a key organisational proficiency. However, one possible barrier to this approach is that most organisational knowledge is held at the individual level (Staples & Jarvenpaa, 2001). Employees utilise their knowledge for their day-to-day tasks (Lam, 2000), and if the organisation is unable to facilitate knowledge sharing among other employees and their counterparts within the organisation, in the absence of that employee the organisation will also lack that corresponding knowledge (Gupta & Govindarajan, 2000). In some organisations employee knowledge is not realised and utilised to the full extent as there is no predefined way for the individual to share their knowledge with other employees in the

organisation (Weiss, 1999). Understanding the knowledge sharing process at an individual level can lead to a superior apprehension of the knowledge sharing process in organisations and whether a relationship exists between knowledge sharing and organisational effectiveness?

Hypothesis 1: There is a relationship between knowledge sharing and organisational effectiveness.

The following section describes some factors identified from the existing literature that have an impact on knowledge sharing in organisations at an individual level.

Factors that Influence Knowledge Sharing

There is a large number of studies in the field of knowledge management. However, there is a lack of research specifically focusing on knowledge sharing at an individual level in organisation, though recent empirical findings explain some of the most complicated dynamics that exist in the field of knowledge sharing (Ipe, 2003). According to the knowledge sharing literature, there are many factors that can have an impact on knowledge sharing process but the two major factors that are relevant to this research are: motivation to share and national culture

Davenport, et al. (1998) describes knowledge as “intimately and inextricably bound with people’s egos and occupations” and suggests that it is not likely to easily flow within the organisation. Stenmark (2001) argues that people are more likely to share knowledge only when a strong personal incentive is involved. These personal motivational factors can be divided into the two categories of internal and external factors, which are likely to have an effect on the sharing of knowledge at an individual level. For example, the value of knowledge to its holder and the reverse psychology that can occur after sharing of that knowledge can be named as internal factors. The association between the sender and the receiver of knowledge and the rewards that can occur for sharing of that knowledge are external factors (Ipe, 2003).

Culture is a term that has been given a wide variety of meaning and connotations. Trompenaars (1993, p. 13) describes culture as “a shared system of meaning” which relates to what we pay attention to, how we can act upon it and what value we may give to it whereas Hofstede (1980, p. 25) describes it as the “collective programming of the mind” that differentiates between members of one group from another. Hofstede believed that human nature and a person’s personality are not the same and that human nature is likely to be common to all people whereas personality is something that is unique for each individual (Hofstede, 2001; 2010). However, on the other hand, Schien (2010) gives culture the roles of solving problems and adaptation to the environment. As mentioned by Hofstede (1984), Dorfman and Howell (1988), McCoy, et al. (2005), and Ali and Alshawi (2004), culture can be divided into four parts: national, organisational, professional and individual. The focus of this study is on national or societal culture: culture that is shared among a society or a country (Hofstede, 1984). National culture is the area within culture which is most studied and is simply based on socialisation (Trompenaars, 1993) or, in other words, values and beliefs learnt during childhood years (Hofstede, 1994). There have been different frameworks and dimensions suggested by researchers for national culture such as the ones by Kluckhohn and Strodtbeck (1961), Hall (1976), Hofstede (1980), Trompenaars and Hampden-Turner (1997), and House, et, al. (2001) which make it a difficult and complex topic to study. However, scholars have tried to simplify some of these dimensions in order to make them measurable, comparable and analytical.

Hofstede’s (1980) model for cultural analysis can also be a useful model. It categorises national culture using four dimensions of power distance, uncertainty avoidance, masculinity versus femininity, and individualism versus collectivism. At a later stage, Hofstede added another two dimensions to his model (long term versus short term orientation, and indulgence

versus restraint). However the validity of the assumptions of this model has been extensively criticised by many in the literature such as McSweeney (2002), Shackleton and Ali (1990), and Dorfman and Howell (1988). Criticisms have included factors such as the sample being taken from just one large conglomerate company exclusively (McCoy, et al., 2005; McSweeney, 2002) and the homogenising influence of a dominant corporate culture is likely to invalidate the true cultural differences between countries (Shackleton & Ali, 1990; McCoy, et al., 2005). In 2002, McSweeney also argued that the difference in results may be the result of sub-cultural differences between the samples and not the true effect of national culture. In 2002, Myers and Tan also suggested that culture is not likely to be stable and static, rather it is dynamic as it is re-interpreted continually over time and may change. Hence assuming that Hofstede's scores are true after many years is not wise (McCoy, et al., 2005). Additionally, Hofstede focused on national culture as the sole level of cultural analysis whereas Karahanna, et al. (2005) suggests organisational and professional culture should also be taken into account.

According to Schein (1985) culture is the “pattern of basic assumptions” that is advanced by a group of people to arrive at solutions to their day-to-day problems. When these principles are applied and turn out to be successful, they are taught and passed on to other members of the group as the suitable way to approach the same or similar problems in future. Hence culture is embedded in the norms, values and practices of any organisation, where these values are embedded in norms that shape exact practices (De Long & Fahey, 2000). Norms and practices that support individual ownership of knowledge severely hinder the process of knowledge sharing within the organisation, as the actions and mindsets of every employee are oriented by culture it-self (Nonaka & Takeuchi, 1995). Culture dominates knowledge processing and communication in organisations and gives recommendations on how to do things and what not to do (Davenport, 1997). According to De Long and Fahey (2000), the effect of culture on this framework can be evaluated along three paths: sharing knowledge with senior level management (vertical interactions), sharing knowledge with other employees at the same level in the organisation (horizontal interactions), as well as outstanding personal communication skills that promotes knowledge sharing within the organisation such as sharing, teaching, and dealing with mistakes. Culture is not likely to be uniform across the organisation (McDermott & O'Dell, 2001). Empirical evidence shows that cultural differences can have a significant effect at both the personal as well as the corporate level in society. National culture is also another major factor to consider due to its deep roots within values, established in our everyday lives from childhood. Cultural norms are part of our day-to-day actions, behaviour and communication skills that are structured by them. Hence, it is relevant to argue that national norms and values are likely to have a significant effect on organisational culture as well as organisational effectiveness (Nazarian, et al., 2013).

Hypothesis 2: The relationship between knowledge sharing and organisational effectiveness is moderated by the national culture dimensions of power distance, uncertainty avoidance, individualism and masculinity.

Research Methodology

Table 1: Research variables

	Constructs	Definition	Source	Hypothesis	Scale
Independent	Knowledge Sharing	Measures the extent to which knowledge sharing occurs between employees.	Zheng (2009)	H1: KS=>OE	7 point Likert

Dependent	Organisational effectiveness	Measures how effective an organisation is in achieving its goals.	Nazarian (2013)
	Uncertainty Avoidance	Measures a society's tolerance for uncertainty and ambiguity; the extent to which the culture likes to control the future.	
Moderating	National Culture	Individualism vs. Collectivism Measures the extent to which people expect to look after themselves and immediate family compared to the degree of support expected from social institutions.	Nazarian (2013) H2: KS=>NC=>OE
	Power distance	Measures the degree to which the less powerful members of society accept and expect that power is distributed unequally.	
	Masculinity vs. Femininity	Measures the distribution of roles between the genders.	

Sampling and Data Collection

This research used the method of convenience random sampling to collect data from managers working in private sector organisations in Iran. 1000 questionnaires were distributed and 357 replies were received (35.7% response rate). The reason for using convenience random sampling was due to operational difficulties despite the fact that convenience random sampling may in some cases minimise the sample's representativeness. However when there is a limitation on accessing resources it can be justified (Sekaran 1983). Unfortunately, the Iranian government's regulation of data collection from organisations inside the country for research conducted outside of the country is very strict. This process becomes even more difficult and time consuming when the research is on some sensitive data such as knowledge sharing, culture and effectiveness (Nazarian, 2013).

Instrumentation

The researcher adopted the scale from Nazarian (2013) to measure national culture that is based on Dorfman and Howell's (1988) study which initially originated from Hofstede's early work on national culture. To measure knowledge sharing, the scale from Zheng, et al. (2009) modified from Gold, et al., (2001) was used. To measure organisational effectiveness the scale designed by Nazarian (2013) was employed which is based on the competing values model (Quinn & Rohrbaugh, 1983; Cameron, 1986) of organisational effectiveness and the organisational effectiveness questionnaire (OEQ). This scale focuses on professional development, quality of development, reward and punishment systems, satisfaction of managers and supervisors, health of the organisation, satisfaction of employees, organisational openness and interaction with the community, employees' job development, customers' satisfaction, employees' personal development and ability to acquire resources, as well as teamwork, trust and communication (Cameron, 1978, 1986; Quinn & Rohrbaugh, 1983). The section relating to national culture consists of 22 questions and was based on the four dimensions of uncertainty avoidance, individualism, power distance and masculinity, while the organisational effectiveness section was composed of 41 questions and the knowledge sharing section included 5 questions. In order to prove the researchers'

genuineness, a covering letter from the researchers together with a supporting letter from Cardiff Metropolitan University was sent out with each questionnaire. Data was collected using online responses (225) as well as paper questionnaire responses (132).

Results

Descriptive Statistics

Table 2: Descriptive Statistics

		Frequency	%	Cumulative %
Gender	Under 25	47	13.2	13.2
	25-34	171	47.9	61.1
	35-44	93	26.1	87.1
	45-54	37	10.4	97.5
	55-64	8	2.2	99.7
	65 & Over	1	0.3	100.0
	Total	357	100.0	
Position	Junior Manager	115	32.2	32.2
	Middle Manager	128	35.9	68.1
	Senior Manager	77	21.6	89.6
	CEO	37	10.4	100.0
	Total	357	100.0	
Industry	Manufacturing	118	33.1	33.1
	Services	239	66.9	100.0
	Total	357	100.0	
Education	High School Diploma/A-levels	26	7.3	7.3
	Undergraduate	136	38.1	45.4
	Masters	167	46.8	92.2
	PhD	28	7.8	100.0
	Total	357	100.0	

The descriptive statistics for the data show that the percentage of female participants was 40.1% whereas the percentage of male participants was 59.9%. Most of the respondents were between 25 and 34 years of age (47.9%). The proportion of respondents with an undergraduate level degree was 38.1% whereas those with a post graduate education level

was 46.8%. There were also a few respondents with PhD as their highest level education (7.8%). The participation of middle and senior managers in this research was high (35.9% and 21.6% respectively), while the proportion of chief executives was only 10.4%.

Reliability of the Constructs

Before proceeding further with the analysis, data was cleaned and outliers as well as items with low item to total relations were removed. The sample was reduced to 345 responses and items in the organisational effectiveness construct were reduced to 23. Afterwards, the reliability of the constructs was checked by looking at the value of Cronbach's alpha for each set. Cronbach's alpha calculates the internal stability of each item within the construct (Hair, et al., 2010; Malhotra & Birks, 2006; Malhotra, 1998). As a benchmark, alpha values of 0.7 and above are known to be satisfactory, whereas values around 0.6 are considered to be acceptable and values below 0.5 are taken into account as poor (Sekaran, 2003). Table 3 presents the Cronbach's alpha reliabilities associated with all scales included in this study. Alpha scores were found to approximate, or be above, 0.70 in all cases, apart from the power distance element of national culture with a value of 0.67. Overall, these results indicate acceptable reliability with regard to all scales.

Table 3: Factor Loading, Scale Mean & Cronbach's Alpha

Construct	Measurement Item	Factor Loading	Scale Mean	Cronbach's Alpha
Uncertainty Avoidance	UA1	0.628	5.59	0.715
	UA2	0.599	5.57	
	UA3	0.403	5.71	
	UA4	0.525	5.50	
	UA5	0.694	5.40	
National Culture Individualism	IDV1	0.557	4.91	0.768
	IDV2	0.586	5.29	
	IDV3	0.628	5.46	
	IDV4	0.560	4.74	
	IDV5	0.613	4.79	
	IDV6	0.498	4.27	
Uncertainty Avoidance	PD1	0.426	3.62	0.674
	PD2	0.461	4.19	
	PD3	0.472	4.27	
	PD4	0.411	3.81	
	PD5	0.614	3.59	
	PD6	0.578	3.05	

Masculinity	MAS1	0.720	3.19	
	MAS2	0.722	3.31	
	MAS3	0.751	3.46	
	MAS4	0.781	3.28	
	MAS5	0.782	3.08	0.913
Knowledge Sharing	KS1	0.587	5.22	
	KS2	0.609	5.35	
	KS3	0.564	5.40	
	KS4	0.474	5.41	
	KS5	0.421	5.23	0.771
Organisational Effectiveness	OE1	0.457	4.37	
	OE2	0.410	4.76	
	OE3	0.610	4.84	
	OE4	0.564	5.26	
	OE5	0.486	5.60	
	OE6	0.572	4.77	
	OE7	0.557	4.53	
	OE8	0.600	5.25	
	OE9	0.471	4.89	
	OE10	0.646	4.99	
	OE11	0.563	4.68	
	OE12	0.605	4.8	
	OE13	0.661	4.85	
	OE14	0.439	5.26	
	OE15	0.574	5	
	OE16	0.524	4.31	
	OE17	0.532	4.43	
	OE18	0.549	4.12	
	OE19	0.558	4.48	
	OE20	0.507	4.79	
	OE21	0.442	4.55	0.888

OE22	0.407	4.1
OE23	0.448	4.04

Table 4: Pearson correlation

	Uncertainty Avoidance	Individualism	Power Distance	Masculinity	Sharing	Effectiveness
Uncertainty Avoidance	1					
Individualism	0.446**	1				
Power Distance	0.109*	0.217**	1			
Masculinity	-0.082	0.133*	0.396**	1		
Sharing	0.160**	-0.041	-0.163**	-0.119*	1	
Effectiveness	0.061	0.004	0.067	-0.046	0.334**	1

N : 345, *: P<0.05, **: P<0.01

Additionally, Pearson's correlations were also conducted in order to test the relationships. A significant positive moderate correlation were found between knowledge sharing and organisational effectiveness, $r(345) = .334$, $p < 0.001$. Diagnostics conducted also found no large variation from normality or linearity in these analyses.

Hypothesis Testing

Table 5: Regression & Moderation Analysis

	Independent Variable	R Square	F	B Coefficient	Standard Error
H1	Knowledge Sharing	0.158	64.279	0.424**	0.053
H2a	Knowledge Sharing X Uncertainty Avoid.	0.1624	20.3791**	-0.0863*	0.0613
H2b	Knowledge Sharing X Individualism	0.1581	21.1527**	-0.0193	0.0653
H2c	Knowledge Sharing X Power Distance	0.1758	25.4866**	-0.0297	0.0751
H2d	Knowledge Sharing X Masculinity	0.1591	18.2226**	-0.0278	0.0408

Dependent Variable: Organisational Effectiveness *: P < .01, **: P<.001, N: 345

Hypothesis 1: There is a relationship between knowledge sharing and organisational effectiveness.

In order to test hypothesis 1, regression analysis was employed. The results show that the model is significant in predicting organisational effectiveness and that knowledge sharing (B=0.424, P<0.001) is also a significant predictor of organisational effectiveness. A value of R-square of 0.158 implies that 15% of the variation in organisational effectiveness can be

explained by knowledge sharing. Hence it can be concluded that there is a significant relationship between knowledge sharing and organisational effectiveness.

Next, the process tool from Hayes (2013) in SPSS and the approach also used by Field (2013), was employed in order to test the second hypothesis. In this approach an interaction term between the predictor and the moderator variable is calculated. If this interaction yields significance, then it can be concluded that moderation has occurred on the relationship between the predictor and the outcome variable.

Hypothesis 2: The relationship between knowledge sharing and organisational effectiveness is moderated by the national culture dimensions of power distance, uncertainty avoidance, individualism and masculinity.

The moderating variable national culture consists of four constructs: uncertainty avoidance, individualism, masculinity and power distance. Each construct consists of 6 items apart from uncertainty avoidance and masculinity with 5 items each. To investigate whether national culture moderates the relationship between knowledge sharing and organisational effectiveness, each dimension of national culture was tested separately so hypothesis 2 was divided to 4 sub-hypotheses each focusing on one national culture dimension's moderation effect.

H2a. Uncertainty avoidance moderates the relationship between knowledge sharing and organisational effectiveness.

The second row in table 5 summarises the moderation result for hypothesis H2a. The overall model is significant ($F=20.3791$, $p<0.001$) accounting for 16% of the overall variance in organisational effectiveness ($R-Sq=0.1624$). Both uncertainty avoidance (moderator variable) and knowledge sharing (independent variable) are significant predictors of organisational effectiveness however the interaction variable (knowledge sharing x uncertainty avoidance) which indicates moderation did reach significance at $p < 0.01$ and so we can conclude that uncertainty avoidance does moderate the relationship between knowledge sharing and organisational effectiveness.

H2b. Individualism moderates the relationship between knowledge sharing and organisational effectiveness.

The third row in table 5 summarises the moderation result for hypothesis H2b. The overall model is significant ($F=21.1527$, $p<0.001$) accounting for 15% of the overall variance in organisational effectiveness ($R-Sq=0.1581$). Both individualism (moderator variable) and knowledge sharing (independent variable) are significant predictors of organisational effectiveness; however, the interaction variable (knowledge sharing x individualism) which indicates moderation, did not reach significance at $p < 0.01$ and so we can conclude that individualism does not moderate the relationship between knowledge sharing and organisational effectiveness.

H2c. Power distance moderates the relationship between knowledge sharing and organisational effectiveness.

The fourth row in table 5 summarises the moderation result for hypothesis H2c. The overall model is significant ($F=25.4866$, $p<0.001$) accounting for 17% of the overall variance in organisational effectiveness ($R-Sq=0.1758$). Both power distance (moderator variable) and knowledge sharing (independent variable) are significant predictors of organisational effectiveness; however, the interaction variable (knowledge sharing x power distance) which indicates moderation, did not reach significance at $p < 0.01$ and so we can conclude that power distance does not moderate the relationship between knowledge sharing and organisational effectiveness.

H2d. Masculinity moderates the relationship between knowledge sharing and organisational effectiveness.

The fifth row in table 5 summarises the moderation result for hypothesis H2d. The overall model is significant ($F=18.2226$, $p<0.001$) accounting for 15% of the overall variance in

organisational effectiveness (R-Sq=0.1591). Both masculinity (moderator variable) and knowledge sharing (independent variable) are significant predictors of organisational effectiveness; however, the interaction variable (knowledge sharing x masculinity) which indicates moderation, did not reach significance at $p < 0.01$ and so we can conclude that masculinity does not moderate the relationship between knowledge sharing and organisational effectiveness.

Table 6: Summary

	Independent Variable	Moderator	Result
H1			Supported
H2a	Knowledge Sharing	Uncertainty Avoid.	Supported
H2b		Individualism	Not Supported
H2c		Power Distance	Not Supported
H2d		Masculinity	Not Supported

Dependent Variable: Organisational Effectiveness

Discussion and Conclusion

The aim of this research was to investigate the association between knowledge sharing, national culture and organisational effectiveness in Iranian private sector organisations. In order to do this, scales used by previous researchers were employed. Knowledge sharing was taken as the independent variable, organisational effectiveness as the dependent variable and national culture as a moderator on the relationship between the two variables. From a general point of view, the regression analysis results show that there is a positive direct and significant relationship between knowledge sharing and organisational effectiveness; however, there is insignificant association when national culture dimensions are added as moderators to this relationship, apart from the uncertainty avoidance dimension which yielded a weak but significant result implying negative partial moderation on the relationship between the predictor and outcome variable. A moderating variable has an impact on the strength of a relationship between two variables when taken into account and is statistically significant. In the case of this research we can conclude that the strength of the relationship between knowledge sharing and organisational effectiveness is not affected by any dimension of national culture apart from uncertainty avoidance which is likely to have a weak negative impact.

Previous research by Yang (2007) focusing on the relationship between knowledge sharing and organisational effectiveness concluded a direct significant relationship between the two variables. On the other hand, Nazarian & Atkinson (2012) concluded that there is a significant direct relationship between the uncertainty avoidance dimensions of national culture and organisational effectiveness. Building on these two studies, this study can confirm these results and enhance them by concluding that the national culture dimension of uncertainty avoidance moderates the relationship between knowledge sharing and organisational effectiveness which is an indirect relationship between the two variables. Previous research in this area such as the examples above lead us to expect that there will be a moderating impact on the relationship between knowledge sharing and organisational effectiveness when inserting dimensions of national culture, however, the results of this

research only indicate this in the uncertainty avoidance dimension. This result demonstrates that national culture is not endogenous to the relationship between knowledge sharing and organisational effectiveness and suggests that there may be an indirect relationship when the national culture dimension of uncertainty avoidance is taken as a moderator in this relationship.

The area of the literature corresponding to indirect relationships between knowledge sharing, national culture and organisational effectiveness is underdeveloped and much further research is essential to fully complete the gaps in the literature. As the data for this research originates only from managers working in Iranian private sector organisations, it may not be wise to fully generalise, therefore only a direction for further research is indicated by this research. To conclude, this research indicates a mild correlation between knowledge sharing and organisational effectiveness and a weak negative moderation effect when the uncertainty avoidance dimension of national culture is taken into account as a moderator in the initial relationship. Future research should be considered to assess these dimensions to lay out a better understanding of the results of this research.

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