Does The Individual's Culture Play A Role In The Value Perception Of Members Of Small Multinational Teams?

Sven Horak

Research Associate, Institute of East Asian Studies, Mercator School of Management, University of Duisburg-Essen, Germany

Correspondence: sven.horak@uni-due.de, svenhorak@web.de

Abstract

Whereas the impact of culture on international business has been frequently investigated, the impact of culture on value perceptions especially in small teams has received less attention in the academic debate. This research note investigates the impact of culture on a small team represented by a group of international students. The underlying research question is to investigate whether the culturally influenced work values on country level discovered by Hofstede can be confirmed in small multicultural teams too. In summary, this study could not find clear indications that cultural dimensions play a role on a small group level. This result might be explained by the students' adoption to an international environment and by the convergence of cultures due to their dynamic character, especially within a young target group. This pilot study indicates a preliminary result, rather than drawing a valid final conclusion, particularly due to the small sample size of the observed group. Further research in this direction is recommended by investigating a larger number of small teams on the basis of a mulitmethod research approach.

Keywords: Multinational small teams; cultural dimensions; value perceptions; methods.

1. Introduction

Teams consisting of members from different countries and cultures represent a standard team composition today. This is especially true for business sectors that are dominated by multinational corporations [25]. Typical examples include the international finance industry, the automotive sector featuring global production networks and sales linkages or international project management in the industrial and service sectors.

Nowadays Multinational Corporations (MNCs) increasingly recruit new staff on the global labour market instead of hiring staff solely on the local job market. Large corporations focus on recruiting the most talented high potentials available around the world [18].

Multicultural teams consist of members from different nations, with a different cultural background. It is assumed that multicultural teams have the ability to generate a higher team performance due to synergy effects from complementary skills and cultural diversity. When it comes to problem solving, this can theoretically result in more creativity due to the broader horizon of perspectives involved [19].

However, it has been widely investigated that immense problems can arise when high potentials need to work together as a team, just because of their different cultural backgrounds. Indications leading to this assumption are given by several scholars. These include Levi et al [16] who examine characteristics of successful teams about self-organization. Findings include the importance of corporate culture as a primary support for efficient teamwork. Kirkman et al [15] investigate the relationship between team members' cultural values and team effectiveness in self-managing work-teams. A major finding in this study is that team members from collective cultures are more productive, cooperative and empowered than teams comprised of members from individualistic cultures. Swierczeks' [22] research focuses particularly on the impact of culture in international project management teams. He finds evidence that the cultural factor often creates conflicts in teams foremost due to a low degree of collaboration among the team members. Horii et al [14] investigate Japanese and American firms in international joint venture projects focusing on team performance. Quantitative data are analyzed by computational experimentation in this empirical study. Findings include that Japanese and American teams generally perform better when each team works within its familiar organization style. Though these studies have investigated team performance, they have not put the cultural background of the respective members into focus.

The research direction of Matveev and Milter [19] is slightly different compared to the studies mentioned before. They study the impact of culture in multicultural teams by the example of Russian and American managers. A central finding is that intercultural competence can be regarded as a key skill in order to overcome culturally related difficulties. However, intercultural competence seems to be important when the individuals' cultures in a team differ so extremely that extra skills are needed to unleash the positive potential of multiculturalism. But does nowadays, almost 40 years after Hofstede's IBM study, individual culture among members of a young well educated elite really differ that much that it leads to problems because of the individuals cultural background?

In order to study the impact of culture on small multinational teams, a reference group consisting of graduate students was selected. This group appeared to represent a real-world business setting to a large extent[1]. The question of transferability to real world scenarios is critical. Analogies to a business environment can be drawn: e.g., students from different nations must work together in a small project team, solve case studies together and present the results to an audience. A lot of research has come to the conclusion that this kind of team composition usually leads to conflicts such as communication problems, lack of motivation or an unsatisfactory work environment [14, 16, 18, 21, 22, 23].

The research question of this paper basically asks whether the cultural dimensions recognised by Hofstede come into effect when team members are working together with members of a different cultural background or whether small multinational teams are in fact so truly international, that cultural dimensions are irrelevant. In contrast to this, the cultural convergence debate claims that culture does not play a dominant role as a conflicting factor in team management [1]. Furthermore, the research approach tries to test whether the country level values can serve as a reference point to study values of a small work group. Firstly, this paper explains the theory and result of Hofstede's study. It further describes the survey and evaluation method. The last part gives a conclusion of the relevance cultural dimensions have for a team's performance.

2. The dimensions of culture by Hofstede

In the early 1970s, Geert Hofstede conducted a survey based on a questionnaire investigating personal values among 160,000 IBM employees in 67 countries. This survey is still unique in its scope today. The survey's result was the discovery of four dimensions of cultural variations in work-related values: Power Distance (PDI), Individualism versus Collectivism (IDV), Masculinity versus Femininity (MAS) and Uncertainty Avoidance (UAI). In 1991 a fifth dimension was added based on further studies conducted by Hofstede and Bond in East Asia [9]. The additional dimension discovered was named Long-Term Orientation (LTO) or sometimes referred to as "Confucian Dynamism". The design of this survey relates to the original study by Hofstede, thus the fifth dimension is not considered. The four relevant dimensions are briefly described in the following [11].

Power Distance (PDI): Power distance is the extent to which people believe that power and status are distributed unequally and accept an unequal distribution of power as the proper way for social systems to be organized. In other words, people belonging to nations in which PDI is pronounced are much more comfortable with a larger status differential than nations with low PDI values. They show a tendency to autocracy, and believe in fundamental inequality of humans. Additionally, hierarchy is often institutionalized. Employees are more satisfied with an autocratic-paternalistic style of leadership, than with a high degree of individual freedom [21]. Nations with a low PDI score value social inequality to be minimized. These nations also value individual independence. Subordinates should be treated by superiors as "people like you and me" [12].

Individualism versus Collectivism (IDV): Individualists regard themselves as unique and independent achievers ("*I did it for myself*" - attitude) and are more concerned with their own behavior, needs, interests and goals. They value the spirit of competition, individual achievement, independence, assertiveness and pursuit of material wealth. Personal freedom, autonomy and self-interests are regarded as the best inputs to advancement. As colleagues, for instance, pure individualists behave e.g. competitive, assertive and they speak out their opinion. Collectivism on the other side expresses the desire of humans to belong to a group. In contrast to individualists, collectivists highly value serving the community and reaching the group goals [21].

Masculinity versus Femininity (MAS): Nations that score high in what Hofstede refers to as "masculine" tend to have very distinct expectations of male and female roles in society. "Feminine" cultures have more flexible gender roles. They value most interpersonal relationships, quality of life, compromise and cooperation [21]. Hofstede [12] defines masculinity as a *"situation in which the dominant values in society are success, money and things"*. The index value for masculinity is pronounced in Germany, but is substantially more pronounced in Japan [21].

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Uncertainty Avoidance (UAI): This dimension refers to how comfortable people feel with uncertainty. It indicates to which degree members of respective nations try to avoid uncertainty, e.g. by placing a high value to career stability or formal regulations. Nations with a high UAI value tend to be less tolerant and less pluralistic compared to nations with a low UAI value and therewith feel much more comfortable with the unknown. They typically have a pronounced dislike towards formal written or verbal regulations. The consequence is that contracts are not very detailed, allowing adjustments if the situation changes. Countries that score high in uncertainty avoidance prefer formal rules and any uncertainty can express itself in higher anxiety, compared to countries that score low in uncertainty avoidance. Standardisation and formalizing often occurs and contracts - once signed - are to be adhered to by the letter. Since change itself can mean uncertainty as well, it is often met with resistance [21].

3. Approach

The group under investigation was a class of students mastering in international business at a London-based university. The class consisted of 17 students in total. 12 of these students participated in the questionnaire-based survey. Hence, the returning quota is 71%. Participants came from the following countries: Bulgaria, China, Germany, Greece, Hong Kong, Netherlands, Philippines and Poland.

A questionnaire containing eight closed questions was selected as an appropriate survey tool. This method has several advantages, as it allows the formation of categories on the basis of the uniform structure of a questionnaire.

All questions (Q) had to be answered on a scale, ranging from one to five, with 5 relating to "completely agree" and with 1 relating to "completely disagree".

The questions are related to the cultural dimensions decribed before. Questions 1 and 5 refer to the dimension uncertainty avoidance (UAI), questions 2 and 3 refer to power distance (PDI), questions 4 and 7 refer to individualism (IDV) and finally questions 6 and 8 refer to masculinity (MAS).

The purpose of the research design is to investigate whether correlations exist between the attitude of the students and the classification by Hofstede. In the following, the results are presented (Table 1):

Table 1: Summary of the questionnaire-based survey.

	1	2	3	4	5	TOTAL (N)
Q 1 (UAI)	3	2	6	1	-	12
Q 2 (PDI)	1	2	5	3	1	12
Q 3 (PDI)	1	3	6	1	1	12
Q 4 (IDV)	5	5	1	1	-	12
Q 5 (UAI)	-	7	2	2	1	12
Q 6 (MAS)	1	3	4	4	-	12
Q 7 (IDV)	2	2	5	2	1	12
Q 8 (MAS)	1	6	4	-	1	12

Note: Q1 to Q8 refers to question 1 to 8 of the questionnaire. The short term in brackets indicates the relation to Hofstede's cultural dimensions. Scale 1 to 5: 1 = completely disagree, 5 = completely agree.

Table 1 summarizes the decisions of the test persons on the questions asked. In order to compare the results with Hofstede's findings the respective index values of the national affiliation of the participants serve as standard of comparison.

Table 2 shows the observed index values of Hofstede's former IBM study. Here, only those values and cultural dimensions for countries are listed, which are relevant to the target group.

With the values shown in table 2 it is now possible to calculate values for the participating countries, which could be expected when answering the questions in the questionnaire. Here is an example to clarify this thought:

The index value for Greece regarding uncertainty avoidance is 112, which is rather high. According to the definition, this translates, very generally speaking, to the prediction that people from Greece don´t feel comfortable with ambiguity. They prefer clear and formal structures. Therefore, it is most likely that people from Greece would answer question 1 (Q1) and questions 5 (Q5) in the questionnaire applied here with a tendency to "completely agree". It needs to be pointed out that this value dimension was observed on country level, however. Can a similar result be observed on a small team level too, so that value dimensions can be regarded a suitable tool to study small team values?

Table 2: Hofstede's index values of the test persons.

	N	PDI	IDV	MAS	UAI
GERMANY	4	35	67	66	65
CHINA	2	80	15	50	40
GREECE	1	60	35	57	112
BULGARIA	1	70	50	50	80
PHILLIPINES	1	94	32	64	44
POLAND	1	50	60	70	50
HONG KONG	1	68	25	57	29
HOLLAND	1	38	80	14	53

N: Sum of test persons; PDI: Power Distance Index; IDV: Individualism; MAS: Masculinity; UAI: Uncertainty Avoidance Index.
Source: Rothlauf, 1999, p. 27-29

Given an index ranging from 0 to 112 and five defined categories, a bandwidth of 22.4 per category (class) is calculated. Now, based on the national affiliation of the test persons, expected individual answers can be assumed if they would answer analogous to Hofstede's prior findings. This theoretical consideration is shown in table 3.

Table 3: Expected results according to Hofstede's findings.

	1	**2**	**3**	**4**	**5**	**TOTAL** (N)
CLASSES	0 - 22.4	22.5 - 44.8	44.9 - 67.2	67.3 - 89.6	89.7 - 112	
Q 1 (UAI)	-	4	6	1	1	12
Q 2 (PDI)	-	5	2	4	1	12
Q 3 (PDI)	-	5	2	4	1	12
Q 4 (IDV)	2	3	6	1	-	12
Q 5 (UAI)	-	4	6	1	1	12
Q 6 (MAS)	1	-	10	1	-	12
Q 7 (IDV)	2	3	6	1	-	12
Q 8 (MAS)	1	-	10	1	-	12

Note: Q1 to Q8 refers to question 1 to 8 of the questionnaire. The short term in brackets indicates the relation to Hofstede's cultural dimensions. Scale 1 to 5: 1 = completely disagree, 5 = completely agree.

In order to investigate whether the team members' value perceptions under investigation correspond to the characteristics implied by Hofstede's cultural dimension model, the following part attempts to find evidence by means of statistical calculations.

Aim of proving a distribution hypothesis, is to find out how well a set of observed data fits to a set of expected data [4]. The *goodness-of-fit* test invented by Karl Pearson in the early 1900s [20] is a commonly used non-parametric test [17]. The applied testing process used in this example is the chi-square test. To calculate a chi-square statistic observed and expected data are needed. *Observed frequency* refers to the data actually received by the questionnaire survey and *expected frequency* refers to what could be expected according to Hofstede´s classifications.

The chi-square calculation includes five steps. The *null hypothesis*, step 1, states that the two variables are independent:

Step 1: Null Hypothesis and Alternate Hypothesis
H0: There is no difference between the set of observed frequencies and the set of expected frequencies. In our case, this would mean that the target group behaves according to Hofstede's findings.
HA: There is a difference between the set of observed frequencies and the set of expected frequencies.

Step 2: Level of significance and degree of freedom (D$_f$)
To determine whether two variables are related, we need to calculate the degrees of freedom. The value of the degrees of freedom is obtained by multiplying the number of rows minus one by the number of columns minus one:

$$D_f = (\text{Number of rows} - 1)(\text{Number of columns} - 1) = (R-1)(C-1)$$

The degree of freedom is: (8-1) (5-1) = 28. The level of significance is selected at 0.05 level. These two figures result in a critical value (Z_c^2) of 41.3371.

Step 3: Selection of the test statistic

$$\chi^2 = \sum_{i=1}^{r} \sum_{j=1}^{c} \frac{\left(A_{ij} - E_{ij}\right)^2}{E_{ij}}$$

A_{ij} = observed frequencies - in i-row, j-column. E_{ij} = expected frequencies - in i-row, j-column.

Step 4: The value of chi-square
Applying the observed and expected data to the formula results in a value of

$$X^2 = 59.22$$

Step 5: Decision
If the calculated chi-square exceeds the value found in the table, the null hypothesis is rejected.

Critical value (Z_c^2) = 41.3371
Chi square (X^2) = 59.22

$$X^2 = 59.22 > Z_c^2 = 41.3371$$

Chi-square is higher than the critical value, so H0 is rejected. This means, that there is no relation between the observed data and the data collected by Hofstede, on a level of confidence of 95%.

4. Conclusion

The chi-square test reveals, that no relation between the value dimensions on country level of Hofstede and the test person's value dimensions could be observed. In other words, this means the value perceptions of the student group does not correlate positively with the cultural dimensions.

This result may be explained by the background of the participating students. A lot of them already experienced international exposure and may therefore have adopted a rather cosmopolitan attitude. Moreover each of them belongs to the younger generation, is well educated and well informed. They might not be classic representatives of their countries.

It can be claimed that the culturally influenced work values on country level discovered by Hofstede do not represent an appropriate reference to study work values of small groups or individuals. The questionnaire appears to be an inappropriate tool to investigate the influence of culture among a *small sample*. Future research is advised to investige a larger set of groups by putting an *experimental* approach in the center of research methodology accompanied by a qualitative survey and the questionnaire.

5. Discussion

An important point has to be made regarding the survey itself. It can be clearly pointed out here, that the survey's size is too small to get an appropriate database to analyze and compare. This means the result is a vague indication for further research, rather than a valid result. It should be regarded a pilot study which indications might help to develop an accurate approach for a more comprehensive research project. Nevertheless, it points towards further research potential on individuals' and team values.

A critical note on culture research: Methodology represents a critical aspect when investigating culture. Hofstede applied a questionnaire-based method but other methods may represent alternatives or suitable additions, depending on the research subject. Although the questionnaire is more objective and offers a more standardized design, enabling the collection of data in relative large quantities, it has disadvantages when investigating a subject such as culture, which has a natural dynamic and is difficult to quantify. The questionnaire method lacks the ability to capture points that would benefit from being considered in order to understand further nuances of a subject. Additionally respondents might see no individual benefit in answering the questions and hence may answer the questions superficially. Results would also be distorted if the questionnaire would reveal any connection to the respondent, because of potential consequences arising from answering the questions, especially if the respondent's employer is involved.

Although they are more complex to handle and to evaluate in case of larger sets of data, qualitative methods promise to overcome these disadvantages, as they are flexible enough to investigate potentially important points, which would be too complex to analyze with a questionnaire. Scholars choosing qualitative methods include Matveev and Milter [19], who conducted semi-structured interviews among a total of 40 managers and executives in the US and Russia. Gibson and Zellmer [6] represent another example. They conducted structured interviews including 125 Team members from six MNCs imbedded in four cultural regions. However, the way questions are asked is commonly regarded as problematic in cross-cultural studies, because it might be strongly influenced by the interviewer's cultural background. Questions might also be misunderstood due to cultural differences between the interviewer and the interviewee [19].

The question which approach can generally considered best for cultural research is an important one. A rather new development is the application of experiments. The methodology of behavioral experiments in economics gained increased popularity in the past when the impact of culture on individual [5, 10] and group behavior [9] were investigated. One of its advantages is that the experimental methodology puts the test persons in a real world scenario in order to let them make decisions. Experimental methods can be supported by post-experimental questionnaires or interviews (multimethodological research design). The experimental approach appears to be a very promising methodology to advance research on human behavior in economics and business studies in the future.

6. Competing Interests

The author declares that he has no competing interests.

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