

Further Steps in Analyzing the Dimensions of Hofstede's Model of National Culture for Potential Relevance to Risk Analysis in Global Software Development

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Abstract. This paper investigates a theoretical model of national culture by Hofstede as a possible tool for managing risks caused by the influence of cultural diversity and culture within the domain of global software development. For this purpose, data from an explorative qualitative survey is examined. Examples of influence of cultural diversity and culture are given based on this survey. These results are then put into relation to the applicable dimensions of Hofstede's model. At the same time, hypothesis for possible insights for risk management are developed, as well as possible limitations.

Keywords: Cultural Diversity, IT Nearshore, IT Offshore, Hofstede, National Culture, Risk Management, Global Software Development

1 Introduction

The utilization of global production resources is not new to the industry, but in the past two decades the trend of global sourcing has reached the services industry in general and IT services in particular, with USA and UK as leaders in this development. In recent years it can be observed that the execution of these sourcing practices has found some acceptance also in German speaking countries, even among small and medium sized enterprises [1].

The service sector implies strong integration of the customer into the production process as constitutive feature [2]. Therefore, communication between individuals of different nationalities is a more critical part of global sourcing in IT services than in classical industries. In IT services we often find highly specific services or products, and perfect specification of the requirements is the exception, which increases the importance of communication and interaction within the production process.

General research on effects of cultural diversity shows that communication and interaction of individuals can strongly suffer due to the differences between the involved cultures (e.g. [3], [4]). This can also impede organizational and inter-

organizational communication flows and interaction. Scientists are just beginning to analyze the characteristics of these effects within the domain of global IT services and software development (e.g. [5], [6]).

This paper concentrates on the discussion of a theoretical model as a possible tool for risk management concerning the influence of culture and cultural diversity within the domain of global software development. For this purpose we elaborate some basic definitions in the next section. Hofstede's model is explored in Section 3 together with some basic elaboration of our survey. Section 4 focuses on the discussion of our hypothesis and findings and Section 5 provides some conclusions.

2 Definition of Major Terms

Culture is a collective concept that can be used to differentiate between groups. Groups differing in culture have different beliefs, attitudes and values influencing their actions. They can be identified on different levels of a society, e.g., inhabitants of nations or regions, members of organizations and occupation groups [7].

National culture is a set of beliefs, attitudes and values that are typical for inhabitants of a nation and influencing their actions [7].

Corporate culture can be understood as a system of three layers. The lowest layer consists of basic unaware issues or assumptions and influences the layers above. The second layer consists of publicly proclaimed values. The third layer consists of what Schein [8] calls artifacts. They are the parts of corporate culture that are easily observed, they are the result of the interpretation of the values from the second layer based on the assumptions from the first layer. Examples for elements of the third layer are the behavior of the employees, the corporate products and buildings [8].

The *culture of an occupation group* consists of the common beliefs, attitudes and values that influence the actions of this group and that span the border of organizations [8], [7].

We subsume the following activities within the IT domain under the term *Software development*:

- Individual software development
- Migration of software from one platform to another
- Development of standard software
- Application management and associated services

Global Software Development (GSD) is characterized by the involvement of people at different geographical locations that interact across national boundaries to coordinate the development by means of synchronous and asynchronous media [9].

Within this paper the terms *nearshore* and *offshore* will be used to describe the location of utilized resources within IT. Nearshore resources are considered to be resources utilized by a user and his organization that are located in a different country than the user's domestic organization. Offshore resources are resources utilized on a different continent [10]. In this paper the classification of the resources is based on a European perspective. When we refer to IT near- and offshore, we presume utilization in the area of GSD without pointing this out explicitly.

Risk management is a process that has the goal to maximize the gain from positive risks (opportunities) and to minimize the impact of negative risks. To achieve these goals risk management has to define and execute controls that address the identified risks in a proper manner [11]. Within the risk management process the following steps have to be undertaken (based on [11] with modifications):

1. Identify risks (possible events with impact on cost, schedule, quality, or people)
2. Determine likelihood of occurrence (e.g. low, medium, or high)
3. Determine the degree of impact (e.g. low, medium, or major)
4. Define controls to avoid or mitigate impacts of selected risks
5. Execute the controls

In comparison with domestic sourcing strategies in software development additional sources of risks that are specific to GSD are temporal distance, geographical distance, and cultural distance [12]. The further discussion will concentrate on cultural distance as sources of risks.

3 Hofstede's Model of National Culture

Of special interest in our context are models of national cultures. Different models have been developed to allow to measure and compare national cultures and to explain behaviour of individuals by their cultural background. Such models can help to predict possible problems in intercultural cooperation and to develop or judge possible countermeasures; in this way they can also be used as tools within risk management. We provide examples of such use of the model below.

The best known model in this respect is the four dimensional model by Hofstede [13] which has found great acceptance and has been widely applied (e.g. [14]). Hofstede's model is the result of empirical research. The creation of the model began with analyzing the data of value surveys that were carried out among IBM employees at company sites in different nations in the late 1960s [15]. The analysis showed differences between countries that could be linked to four dimensions. These four dimensions that allow to quantify and compare cultures are: *power distance*, *individualism (vs. collectivism)*, *masculinity (vs. femininity)*, and *uncertainty avoidance*. Later studies by Hofstede and other independent researchers supported the findings and enhanced the list of countries for which data is available. In a later book Hofstede's model has been enhanced by a fifth dimension: *long-term (vs. short-term) orientation* [7]. These dimensions are quantified by an index, allowing measuring and comparing national cultures. Table 1 shows these dimension measures and examples of practical consequences in business.

It should be mentioned, that other models or dimensions that are of potential interest in this field do exist, e.g. Schein's model of corporate culture [8], Hall's dimension of perception of time [16], and Kumar and Bjorn-Andersen's dimensions of IS designer values [17]. Some of the latter dimensions have been successfully applied to an investigation on offshore software development in India in a recent publication [6]. The dimensions power distance and individualism of Hofstede's

model have also been applied in this investigation, however, cases of influence of culture or cultural diversity could only be found for the dimension power distance.

3.1 Possible Benefits of Hofstede's Model as Tool for Risk Management in GSD

An important idea of risk management is to anticipate the risks of relevance to the managed activities. There exist lists about which risks can possibly be expected within GSD in general, also for the effects of cultural diversity or culture (e.g. [12], [11]). However, there is little systematic information on how the likelihood of these risks and their possible impact is influenced by the location of GSD activities, even though it is known that the location influences these risks [11].

If it would be possible to use Hofstede's rich data, which covers 74 (PDI, IDV, MAS, UAI) and 39 (LTO) countries respectively, to support the risk manager to form an opinion regarding potential risks in a given situation, this would be of great benefit for practitioners and should also be of advantage for further research. The data of Hofstede's model could also be used to develop new ideas for controls and judge their efficiency related to the GSD locations they are going to be applied at.

Another possible benefit is that the data of Hofstede's model could be used to ensure the sensibility of a (risk) manager to the actual cultural diversity between his domestic and other cultures.

When a GSD location of interest is rather new to the global IT industry, there is little or no experience of the influence of cultural diversity or local culture on GSD activities. In such a case, a tool to help assess the risks that cultural diversity and culture may be posing to a GSD activity would be of very high value.

This paper provides hypothesis for each of the benefits named above, and will point out limitations that exist. For some dimensions this paper is limited to examples of influence of cultural diversity or culture, due to given limitations in space. But as far as examples related to a dimension are discovered, at least one will be given, to ensure to enhance the knowledge available from [6].

3.2 The Qualitative and Explorative Survey

This paper refers to the data of a qualitative and explorative survey in the GSD domain which was undertaken by the Institute of Information Systems at the University of Hamburg [10]. The survey covers different aspects of the use of near- and offshore resources ranging from strategies and goals over process reorganization to the effects and management of culture or cultural diversity.

Table 1. Dimensions and indexes of Hofstede's model of national cultures

Explanation of Dimension and Index	Examples of Extremes Index Values
The <i>power distance index</i> (PDI) measures "the extent to which the less powerful members of institutions and organizations within a country expect and accept that power is distributed unequally." ¹ [7, p. 46]	High PDI: high emotional distance between boss and subordinates; the subordinates are unlikely to approach their boss or contradict directly Low DPI: consultative leadership, low emotional distance between boss and subordinates; subordinates do not fear to contact and/or contradict the boss
The <i>individualism index</i> (IDV) measures the position of a society between the two extremes individualism and collectivism. "Individualism pertains to societies in which the ties between individuals are loose: everyone is expected to look after himself or herself and his or her immediate family. Collectivism as its opposite pertains to societies in which people from birth onward are integrated into strong, cohesive in-groups, which throughout people's lifetimes continue to protect them in exchange for unquestioning loyalty." [7, p. 76]	High IDV: the following goals are of importance for employees: a job should leave enough time for personal life; it should offer the freedom for an individual approach and should be of a challenging nature Low IDV: the following goals are of importance for employees: opportunities to improve or learn new skills through training; good physical working conditions; full use of skills and abilities in the job
The <i>masculinity index</i> (MAS) measures the degree of overlap between emotional gender roles. A high index is assigned when gender roles are clearly distinct. Then one role is supposed to be assertive, tough and focused on material success. The other is supposed to be modest, tender and interested in quality of life.	High MAS: decisive and aggressive management; conflicts are resolved by letting the strongest win; more money is preferred over more leisure time Low MAS: intuition and consensus as management principles; conflicts are resolved by compromise or negotiation; more leisure time is preferred over more money
The <i>uncertainty avoidance index</i> (UAI) measures "the extent to which the members of a culture feel threatened by ambiguous or unknown situations." ² [7, p. 167]	High UAI: there is a tendency towards more formal laws and informal rules controlling employment; ³ there are rules or rituals that are dysfunctional; time is money: people like to be busy; expert opinions from the work floor are important Low UAI: rules are often better followed; high positions are open to generalists with or without knowledge of the domain; people work hard if necessary but like to relax
The <i>long-term orientation index</i> (LTO) measures the position of a society between the extremes of long- and short-term orientation. "Long-Term orientation stands for fostering of virtues oriented toward future rewards – in particular, perseverance and thrift. Its opposite pole, short-term orientation, stands for the fostering of virtues related to the past and present – in particular, respect for traditions, preservation of 'face', and fulfilling social obligations." [7, p. 210]	High LTO: some main work values are learning, honesty, adaptivity, accountability, self-discipline; importance of lifelong personal networks, leisure time is not important Low LTO: some main work values are freedom, rights, achievement, and thinking for oneself; personal loyalties vary with business needs; leisure time is important

Target groups were users of IT near- and offshore in German speaking countries and the UK, service providers from Middle and Eastern Europe, Asia and Africa and further experts with knowledge and experience relevant to the matter of interest (e.g. consultants). Within the field research phase from February till July 2006 more than 50 experts agreed to be interviewed, among them 21 users of IT near- and offshore, 17 of which were from Germany, two from the UK and two from Switzerland (see Table 2).

This paper does not aim to give a comprehensive overview of the survey results. Rather it concentrates on the described goal to possibly identify examples of the

¹ Institutions also include family, school and community [7]

² The avoidance of uncertainty and ambiguous situations should not be mixed with risk avoidance; only unfamiliar risks are feared by cultures with high uncertainty avoidance [7].

³ In countries with high PDI, the existence of power can replace those rules [7].

relevance of Hofstede’s model as a tool for risk management and to explain observations. For this the data regarding near- and offshore users, which has already been completely processed using open coding,⁴ was analyzed regarding the influence of cultural diversity or culture possibly being explained by Hofstede’s dimensions. If such cases were found, the data was also checked for possible contradictions within other countries for the observed effects of the related dimension; for this some examples will be given. Even though the survey was not primarily undertaken to evaluate Hofstede’s model as a tool for risk management, it nevertheless serves to inspire a number of interesting hypothesis.

Table 2. Overview of expert interviews with users of IT near- and offshore.

Case code	Main industry of user	Interview Partner	Case code	Main industry of user	Interview Partner
CH-BY-01	Financial Services	CEO	DE-IN-03	Financial Services	Manager
CH-UA-01	IT Consulting	CEO	DE-IN-04	IT Services	Manager
DE-BG-01	IT Services	Manager	DE-IN-05	IT Services	Manager
DE-BY-01	IT Services	Manager	DE-IN-06	IT Services	Manager
DE-CZ-01	IT Products	CEO	DE-PL-01	IT Services	CEO
DE-CZ-02	IT Services	Project Manager	DE-RO-01	Industry	Project Manager
DE-CZ-03	Financial Services	Manager	DE-UA-01	IT Services	Manager
DE-EE-01	Industry	CEO	DE-UA-02	IT Services	CEO
DE-ES-01	Financial Services	2 Managers	UK-IN-01	IT Services	Project Manager
DE-IN-01	IT-Services	Manager	UK-IN-02	IT Services	Project Manager
DE-IN-02	Industry	Manager	-	-	-
Explanation: User’s country ^a – provider’s country ^{a,b} – number for uniqueness					
^a Countries are coded by top level domains;					
^b This is the country of the relation to the provider the interview was focused on, not implying that there are no further relations to providers nor that these were not mentioned in the interview.					

4 Linkages Between Hofstede’s Dimensions, Risks, and Possible Controls

In the following we explore the possible use of Hofstede’s model as a tool. As a basic foundation for our discussion the scores of countries within the survey or mentioned later on are displayed in Table 3.

⁴ Open coding is a data processing technique that has its root in the research method called “Grounded Theory” [18], but has developed to an also separately applicable processing method for qualitative data [19].

Table 3. Scores for the dimensions of Hofstede's model (based on [7]):

Country ^a	Scores				
	PDI	IDV	MAS	UAI	LTO
BG	70	30	40	85	-
CH	26 ^b	69 ^b	72 ^b	56 ^b	40
CZ	57	58	57	74	13
DE	35	67	66	65	31
EE	40	60	30	60	-
ES	57	51	42	86	19
HU	46	80	88	82	50
IN	77	48	56	40	61
PL	68	60	64	93	32
RO	90	30	42	90	-
UK	35	89	66	35	25
Highest and lowest score within the dimension for all countries with data available					
Min.	11	6	5	8	0
Max	104	91	110	112	118
PDI = power distance index; IDV = individualism index; MAS = masculinity index; UAI = uncertainty avoidance index; LTO = long-term orientation index; ^a No data available for BY and UA ^b German speaking population					

Power Distance, Communication and Hierarchy

In general the Indian employees prefer or insist to communicate with someone of the same hierarchical position on the user's side. This principle is especially important in the case of escalating problems (cases: DE-IN-01, DE-IN-02, DE-IN-03). With steep hierarchies on the Indian side and rather flat hierarchies on the western side, this can quickly turn into a problem, because higher and top management on the western side becomes strongly involved into operational business (cases: DE-IN-02, DE-IN-04), for which these positions on the western side often do not have time, motivation, and competency.

This is a clear effect of high power distance index (PDI) as defined in Table 1, as it shows that in India hierarchies are accepted and people are expected to respect them. The emotional distance mentioned above was also observed by some users (cases: DE-IN-03, DE-IN-04, DE-ES-01 [only at the beginning of cooperation]). One of them reported that after cases of escalation, especially to higher management:⁵

"[...] there is lots of activism and hectic [on the Indian side; Remark of the authors], without any advances in the subject matter." (DE-IN-03)⁶

Moreover, an effect of culture in the area of communication and hierarchy that is also clearly attributable to high PDI was reported by a Western European project

⁵ A very interesting way to contain most of the escalations on the user's side on the shop floor is the introduction of virtual hierarchies within the shop floor team. These virtual hierarchies are of no relevance to the western team, but announced to the Indian side to achieve that the first levels of escalation can 'legitimately' be dealt with by shop floor team members on the user's side (case: DE-IN-03).

⁶ Translated by the authors from German language.

manager with resources in the Czech Republic: He was authorised to sign an agreement and arrived to meet a Czech top manager for this purpose. As the top manager understood that “only” a project manager came for signing the papers, the meeting was delegated to a person about three levels lower in hierarchy (case: DE-CZ-02). There was no meeting or communication with the top manager or his direct subordinates on that visit and any later visits. This user also reported that the Czech’s side was concerned with sticking to the reporting path, also a possible indication of strong process orientation, and that he could not contact higher management without escalation. In this case we can not decide whether process orientation is an element of corporate culture or culture of the occupation group.

We could spot only one additional case of some effects on communication issues related to hierarchies: In this case Spanish employees were upset when mails from the German shop floor to the Spanish shop floor were also sent in copy to higher positions in hierarchy or escalations where started (case: DE-ES-01).

So the impression is that PDI has more often effect on issues related to hierarchy and communication in India than in other locations ranking considerably high in PDI. A possible explanation could be a strong process orientation on the Indian side. Such an orientation is reported by seven users with Indian counterpart (exception: DE-IN-06) and even by some other user with experience with India (case: DE-UA-01). These users describe the problem solving or working style as less pragmatic and more systematic than on the user’s side.

Our interpretation: A high PDI can have impact on communication issues related to hierarchy. This impact can be increased by a strong process orientation. The reason is that such an orientation, in combination with high PDI, leads to a spread of activities, responsibilities, and competencies over the hierarchy within the processes.

Individualism and Benefit of Personal Informal Relations

Two users identified personal informal relations as possible solution for a reasonable part of the escalations. Personal informal relations helped to informally solve (case: DE-IN-04) avoiding escalations or achieve mutual clarification of the cases more efficiently (case: DE-IN-03). They may also allow the informal agreement of services that have not been agreed upon in the contract (case: DE-IN-06):

This links to the effects of collectivism (low individualism index [IDV]), enabling the client with trustful relations to be considered as member of the in-group of the staff of the provider. This status is the basis for preferential treatment: “[...], in the collectivist society the personal relationship prevails over the task [...]” [7, p. 103].

Some other positive effects of personal informal relations are described, which can be expected to be supported by the in-group effect:

- Increase of open communication (case: DE-CZ-02, DE-IN-05)
- Unofficial information about problems (cases: DE-CZ-02)

„There were some colleagues [on the Czech side; Remark by the authors]; from them I still received information secretly, as it became critical” (DE-CZ-02)⁷

- Higher loyalty and lower personnel turnover (case: DE-IN-01)

⁷ Translated by the authors from German language.

– Higher commitment (case: DE-IN-01)

One user even sees sympathy as a condition to be able to stay in business with his Ukrainian counterpart (IDV: N/A). This user also points out that for business with American (IDV: 91) or German counterparts personal antipathy would mean no problems for business relations (case: DE-UA-01).

Possible recommendations / hypothesis for risk management concerning locations with low IDV:

- Control: Given the limited effectiveness and efficiency of contracts for international relations [20], the typical budget for contract design should be reduced (in comparison to locations with higher IDV) in favour of reserving resources for establishing and maintaining personal informal relations (e.g. travel, social events).

- Control: In locations with high PDI these relations should also be established and maintained between the top and higher management of both sides.

Since the subordinates on the provider's side usually do not question the directives of top and higher management, good relations on the shop floor will be of little benefit if decisions are made by the management that do not match the interests of the user. In countries with lower PDI, due to the consultative fashion of leadership, there are some chances that local shop floor employees can influence such decisions to the favour of the user. So with decreasing PDI the intensity of efforts by higher management can be reduced.

- Judgement: Poor personal relations are likely to result in standing back behind other customers or experience of bad services.

For locations with a higher individualism index (IDV) rating the suggestions can be interpreted reciprocally.

The applicability of suggested controls may not be limited specifically to GSD, but the possible positive impact of managing IDV related risks can well be considered higher than for many other industries. This is because the effectiveness and efficiency of contracts is limited in international business relations and it is a major problem to defining all-embracing acceptance criteria [20]. The opportunity to use personal informal relations for solving arising problems and addressing necessary changes in service has greater potential impact.

Individualism as Inspiration for Definition of a Control

High personnel turnover is a problem in many near- and offshore locations. In a collectivistic society the desire for the working place to be an in-group to the employees is always present, not meeting this need leads to lower loyalty [7]. So this leads us to suggest the following control:

- Control: For countries with low IDV the emergence of in-group feelings among local employees and maybe beyond the locations should be supported to increase loyalty.

Of course this will most likely not eliminate the problem in countries where there is a fierce competition for the working force, but chances are good that it can reduce the personnel turnover to some extent. Such an effect is reported by one user (case: DE-IN-01).

Uncertainty Avoidance and Productivity

Germany has a considerably higher uncertainty avoidance index (UAI) than India, and some symptoms as described by Hofstede and Hofstede (2005) can be observed. For Germany the sentence “time is money” [7, p. 189] is certainly true (high UAI). An example of time as a “framework for orientation” [7, p. 189] (low UAI) can be found in our data: An expert from Germany reports that his database administrator was shocked to find out that an Indian employee at the provider’s side would start a batch process (which would take some considerable time) and would then watch this process instead of working on other tasks in the meantime (case: DE-IN-04). Another example of a different perception of the value of time was also given by one user who noticed that the amount of work employees at the Indian location finish within a working day is less than the amount his local employees finish within a shorter working day. The reason for this observation is seen in more breaks and a relaxed attitude towards work (case: UK-IN-01):

“If I compare what my team in Britain achieves within 7.5 hours, then we achieve more than someone in India in 8 hours. They have a lot of breaks, they are much more easy going and they don’t perceive work as stressful as we would imagine. It’s just what they do.” (UK-IN-01)⁸

This user also reports that Indian personnel will only be available for actual productive work for between 55% to a maximum of 75% of working hours, whereas British personnel will be available for about 85% of the time. Only one user considers productivity of the Indian side to be higher (case: UK-IN-01).

This is one possible explanation for the Indian’s calculations of personnel expenditure often exceeding the user’s own calculations or calculations by other providers, an observation frequently reported by European users, (cases: UK-IN-02, DE-BY-02,⁹ DE-IN-02, DE-IN-03, DE-IN-04, DE-IN-05). The Indian calculations could only in some cases be reduced to some extent, and fully only in one case (case: UK-IN-02).

Higher productivity than in India is reported by one user for Hungary, being close to the UK, and generally for Eastern Europe (case: UK-IN-01). A German user reports equal productivity of German and Czech workforce (case: DE-CZ-01).

Possible recommendations / hypothesis for risk management concerning locations with low UAI:

- Control: Where possible, information about workforce productivity should be investigated in advance. Otherwise the business case should be calculated assuming lower productivity than at locations with higher UAI.
- Control: Own calculations of expenditure should be made for comparison in any case.

⁸ Translated by the authors from German language.

⁹ In comparison to calculations by the chosen provider from Belarus.

*Limitation:*¹⁰ Britain has even lower UAI than India, nevertheless the user reports higher productivity for his domestic location.

Some possible explanation is: Some Asian and African cultures by tradition have a cyclical perception of time [21], [22]. This concept of time is characterized by the belief that time repeats, as morning, noon, evening and night repeat [23]. Within the logic of this concept time can not be wasted, since it will come back again. This concept of time also applies for the culture of India [23]. Industrialisation has a long-term influence on the perception of time by the members of a society, since it implies the need of precision and synchronization [21]. As India is not that far advanced in this process, the traditional perception of time could support a stronger effect of the low UAI. For Britain two factors reduce the effect of the low UAI: Industrialisation has reached the whole population already a long time ago with effect on the attitude towards time and a linear perception of time within British culture [23]. Within a linear perception of time it is valuable since it always advances, if passed and not used it is considered to be wasted [23].

Uncertainty Avoidance and Tolerance for Ambiguity

For some effects Hofstede's model would lead to other expectations: e.g., low UAI should lead to "tolerance for ambiguity and chaos", but many cases show, that concerning specifications and working instructions the Indian side has very high expectations (cases: DE-IN-03, DE-IN-04, UK-IN-01, UK-IN-02):

"They like their preparation to be a little more rigorous. For example: If we were developing a module that had interfaces produced by some other part of the organization, I think the European culture would be happy to start producing that module and add in the interfaces as we went forward. Whereas I think the offshore model is assemble everything in front of you before you start work." (UK-IN-01)

Our interpretation: The high expectations by Indian locations concerning specification and working instructions can be explained by the strong process orientation, which we described before. This culture of the occupational group limits or overrides the effect of the low UAI.

Long-term Orientation and Long Hours

It should be expected that in cultures with high LTO "leisure time is not important" [7, p.225]. Cases show that working over time (cases: DE-IN-01, UK-IN-01) and on weekends (case: DE-IN-04) is not a critical topic in India, e.g., employees were ready to work over a period of one month on weekends, do long hours and even work on an important national holiday (case: UK-IN-02). Employees even had to be kicked out of office (case: DE-IN-01) to force them to take a rest:

"The motivation is extreme; they will work as long as needed. There will be no discussion about long hours or

¹⁰ Here we present limitations that are visible from our data; more general limitations to the approach will be discussed in Section 5.

anything. They don't appear unwillingly, they appear - I would say - by intrinsic motivation. We already had people that we had to kick out of the office, because they just enjoyed it." (DE-IN-01)¹¹

Assuring Sensitivity for Real Cultural Differences

Two users of nearshore resources were surprised by the effects of cultural diversity they experienced, both from Germany. The locations that caused the surprise were Spain (case: DE-ES-01) and Hungary (case: DE-IN-06). A look into of the data for Hofstede's dimensions could have prevented the surprise, since it is visible that these countries score differently, for the case of Spain even considerably. In both cases a part of the differences noticed by the users can be linked to the higher PDI.

5 Outlook

We have presented results of a survey on IT near- and offshore and put them into perspective with respect to the widely known model of Hofstede regarding culture. The survey and its discussion can not produce representative results in all cases, especially not for the Middle and Eastern European countries which are represented only once or a few times in the sample. Another limitation is that the survey was not primarily undertaken to evaluate Hofstede's model for risk management. Nevertheless the data provides valuable insights that can be put into relation to Hofstede's and other models and dimensions of culture for explanation of the phenomena observed, creation of hypothesis and validation and enhancement of the existing models and findings.

That is, for three dimensions (individualism, uncertainty avoidance, long-term orientation) of Hofstede's model we give indications for the practical relevance within the sphere of IT near- and offshore. We can also support the findings of Winkler et al. (2007) that power distance is potentially of high relevance for the subject matter. For one dimension we could not find any indication (masculinity). Note that the description of the effects of the dimensions of Hofstede's model is sometimes rather soft and that the discriminatory power between the described effects of the dimensions is in some cases rather low. We tried to provide only cases where the relation between the cases and the effects of a dimension seems rather clear to us.

It has also become clear, that the effect of a dimension can be different than Hofstede's research and findings would suggest, due to the influence of other cultural factors which are not covered by the dimension of national culture. These factors can be specific to the country, to corporate culture or the culture of the involved occupational group. These requirements are also supported by other research on culture in the domain of IS [24]. To figure out in more detail and more reliably to which aspects of GSD Hofstede's dimensions can be applied, and which models or dimension need to be combined with each other, wider and possibly quantitative

¹¹ Translated by the authors from German language.

research is needed. We are able to show for the mentioned additional dimensions of Hofstede's model that this is a promising challenge.

Even if we have findings, that support Hofstede's model in one country or one case, one has to be careful to transfer these findings to other cases and countries. That is, all research that applies Hofstede's model to a new domain, location, and maybe even combination of locations can lead to new knowledge.

Knowing this, Hofstede's model in combination with other models and dimensions can be useful for practical risk management to gain a deeper understanding of effects of culture and cultural diversity in the domain of GSD. Especially putting the models into relation to existing experience with a location to understand effects that have occurred can help to develop new controls that address these effects efficiently. In situations where there is no information or no experience with a location or a combination of locations, findings of general research on the different levels of culture mentioned could be gathered and be a base for the estimation of possible influence. If no or little existing research can be found, Hofstede's model can at least allow making "an educated guess". Our general hypothesis for controls can serve as example. They can be applied if no further information is available and falsified or confirmed for different locations.¹²

Last but not least we have given one example how creatively practitioners solve problems that arise from cultural diversity within the domain of GSD.

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¹² Feedback to the authors on any aspect of the paper that emerges is welcome.

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