

# **CULTURAL FACTORS AND PROJECT MANAGEMENT SUCCESS: A MULTINATIONAL STUDY FOR THE US, GERMANY AND JAPAN**

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## **ABSTRACT**

In an increasingly global economy, international projects are expected to play an ever more important role. In such large-scale global or international projects, members from different countries and cultural backgrounds have to cooperate to generate success. Nevertheless, these recommendations rarely consider cultural aspects. At the same time, both literature and management practice rarely shed light on the perspective and experiences of project managers involved in this area.

This study aims at contributing to close gaps in (1) knowledge about the importance of such projects and (2) about the implication of such complex, often cross-cultural settings on project success. A multinational empirical investigation with real-life project managers was set up in the US, Germany and Japan in order to provide guidance to these two sets of research questions. An internet based survey resulted in 768 usable questionnaires from these countries.

Asked about the relevance of international projects, as expected 668 (87.88%) of the participants stated, that international projects had a high importance for the company. and 567 (74.61%) found that the number of international projects is increasing. Type of company and industry had none or a small impact on the project success. It was also shown that for the sample, time and budget over-runs as a measure of (negative) success in fact do correlate.

The results showed an intermediate correlation of the project members' nationality and the project success. Furthermore, the nationality of the team members had an even larger impact on the project success than the nationality of the individual respondent. This leads to the conclusion that the nationality of the majority of the project members had a stronger impact on the project success than the nationality of the individual respondent.

When working with a project team mainly coming from the USA, e.g. the time/budget over-runs were least compared to the other two nationalities (US-American with US-American team: Time: 14.78, Budget: 15.43; German with US-American team: Time: 17.29, Budget: 13.29; Japanese with US-American team: Time: 20 Budget: 18.4). In contrast the time/budget over-runs among project teams mainly consisting of Japanese were twice or threefold higher (US-American with Japanese team: Time: 49.13, Budget: 46.52; German with Japanese team: Time: 48.15 Budget: 58.15). There is an even greater delay in time and budget within a homogenous Japanese team structure (Japanese with Japanese team: Time: 59.52, Budget: 59.76).

When examining the relationship of project success and the single culture, explicit differences occurred among the three countries Germany, Japan and the USA. According to the answers of the respondents it seems that the Japanese hardly achieve a time/budget under-run. In comparison the German and the US-American teams are more likely to achieve better results. In addition the US-American teams realized less time/budget overruns than the Germans and especially the Japanese.

Whilst cultural factors clearly have an influence on project success, further research should be done. A further development towards even more global value-chains and markets will also generate new research needs. Further focus on the topics raised in this promises to improve competitive advantage for companies that are involved in international projects. As a result, labour and capital productivity on projects will increase dramatically, as a more comprehensive cultural framework for projects can be developed in the future.

# **CULTURAL FACTORS AND PROJECT MANAGEMENT SUCCESS: A MULTINATIONAL STUDY FOR THE US, GERMANY AND JAPAN**

## **Introduction**

With globalization being a major trend, the management of intercultural projects should become increasingly critical. In those large-scale global or international projects, members from different countries and cultural backgrounds have to cooperate to generate the necessary outcome (Kerzner, 2004). Today's literature provides numerous methods for the realization of such projects. Nevertheless, these recommendations rarely consider cultural aspects. Also in practice, in many cases project managers do not receive proper preparation for their international deployment (Hoffmann, Schoper and Fitzsimmons, 2004). At the same time, both literature and management practice rarely shed light on the perspective and experiences of project managers involved in this area.

The objective of this paper is to contribute to this – potentially – emerging field and to help close some of the mentioned gaps. In essence, the authors want to come up with answers to the questions whether (1) the globalization of markets leads to a high(er) number of intercultural projects and whether (2) some cultural factors can be identified that affect project success in such a complex environment involving project managers from different cultures. A multinational empirical investigation with real-life project managers shall provide guidance to these two sets of research questions.

As “statistics show that over half of international projects either fail, fail to be completed, or do not deliver the results that were promised” (Lientz and Rea, 2003, p. 4), such a study seems timely – and a focus on project success factors has been chosen accordingly. The authors take this clue and for the purpose of this study define project success as related to time/budget over-/under-runs.

## **Literature Research**

The review of literature focuses on the proliferation of larger projects, related methodologies and the impact of a country's culture on such projects. As a starting point, the authors refer to the vast literature on globalization and focus on the fact that the establishment of trade relations for export or import, common joint ventures, or acquisition of interests are oftentimes carried out in the form of a project (Kiesel 2004). Cultural aspects play into this multinational process and need to be analysed accordingly.

## **Definition and Fields of Culture**

In each country different elements have been named as relevant factors for company success. One can assume that actions that are implemented to lead to company success differ as well (Deresky 2007). The comparison of the results leads towards a major issue of multicultural project managing.

Etymologically the term “culture” can be derived from the Latin word “cultura”, which means “growing” or “cultivation” (Haecker, Stapf and Dorsch, 2003, p. 417). The meaning of “culture” can differ a lot depending on which aspect of life the definition focuses on, but literature provides several key elements:

- Universality - Culture, respectively its defining elements, are shared by and passed on from members of society (McCarthy, 1989).
- Time - Culture is acquired and transferred from generation to generation (Hofstede, 1997).
- Symbols - Culture is reflected in symbols; in tangible culture such as products and goods, as well as intangible culture, e.g. ways of thinking, behavior, values (Geertz, 2003).
- Orientation - The main function of culture for its members is to give orientation. It is indirectly steering them by collective programming (Hofstede, 2001).
- Change - Members of culture are not only being part of it but also forming culture. While being geared by values which were available in previous generations they change the same by interpreting and living them their own way (Inglehart and Maeurer, 1989).

Trompenaars and Hampden-Turner (1997) content that culture is not bound to national borders. For them, a certain culture develops when there is a group of people sharing the same values and ethical views, and they specifically differentiate between national culture and corporate culture. Taking this approach to the next step, different levels of can also be found inside a sufficiently large company.

Most of the time organizational cultures have a direct influence on projects (Project Management Institute, 2004), and projects tend to develop their own culture that makes them unique – and at the same time makes them evolve together with the organisational culture. In that context project culture can be comprehended as an accumulation of conventions, values and also related rules of a project (Gareis, 2007). In particular, in international projects project culture serves as a joint base that all project members share.

## **Definition and Management of Projects**

There are manifold definitions of a project, but what they all share is a set of characteristics that clearly distinguish projects from on-going, operational work. According to the German Institute for Standardization’s DIN 69901 Standard, a project is defined as an “enterprise that is characterized by unique conditions such as a particular target setting, restricted resources, separation from other ventures and specific organization” (Koreimann, 2002, p. 11). As a result, in order to identify a project in practice, it makes sense to examine the applicability of certain characteristics. Literature provides a wide range of such criteria, the major ones being:

- Clear objective - The results of the contents to be achieved are clearly specified (Meier, 1998). Project tasks are coupled with assignments or customer requirement specifications which define significance, objective and purpose of a project (Salzgeber, 2001).
- Novelty connected to uncertainty and risk - Projects are intentions which are implemented in this form for the first time, so that its core tasks cannot be

overwhelmed by routine actions. Thus, every project is afflicted with a certain risk, while it is never possible to anticipate, if the set objectives can be reached. Hence, the probability of failure by project tasks is larger than for routine activities (Kraus and Westermann, 1998).

- Temporal limitation - Projects are temporal tasks with a clear defined start (project start, kick-off) and end (closing). Projects start with the awarding of the project contract and end with the objective achievement. In cases the project objective appears no longer to be accomplishable projects end with an interruption (Salzgeber, 2001).
- Range overlapping - Due to the interdisciplinary character of projects, their planning usually involves several departments (Fuchs, 1999).
- Complexity - By reason of their high degree of novelty, their number of project participants, or risk they bear, projects can be described as complex intentions (Birker 1999).
- Limited resources - Typically, the resources of an enterprise are limited. Therefore, a constant competition for available means as well as qualified personnel arises between project and line tasks (Kraus and Westermann, 1998).

Taking these characteristics into a multinational environment, Kiesel (2004, p. 8) broadly defines an international project as a project, "in which people from different culture areas are participating directly or indirectly." An international project is therefore a project which involves multiple locations, organizations, entities and business units (Lientz and Rea, 2003).

Project management is that kind of management, which is needed in order to lead a project in a specific way, a specific time and with specific resources to a specific result (Stevens, 2002). As a result the definition of the Project Management Institute is: "Project management is the application of knowledge, skills, tools and techniques to project activities to meet project requirements. Project management is accomplished through the application and integration of the project management processes of initiating, planning, executing, monitoring and controlling, and closing" (Project Management Institute, 2004, p. 8). Literature confirms that this approach actually positively affects the success quota of projects (Schelle ,1996), as a it helps the attempt to react faster to the change in its environment without the necessary requirement of a complete new organization.

There are large numbers of possible methodologies which are available for project managers in the market. The choice of the methodology depends on the industry where the project is implemented. This is due to the fact that in every industry the projects have differences in life cycles, market sectors, products and technologies (Charvat 2003). However, generally accepted and standardized approaches still have their place, among them local guidelines by professional organisations such as the Project Management Institute (2001) launched by the Project Management Institute and often seen as a benchmark (Charvat, 2003), or the Guidebook of Project and Program Management for Enterprise Innovation published by the Project Management Association of Japan (2003) in local language. Given that in the experience of the two authors, Europe refers to the overall Project Management Institute guidelines, this set already gives an overview of approaches used in America, Europe and (parts of) Asia. Two languages thus allow covering three cultural fields.

## Differences among countries

Based on both the notion of Triad markets and their own work experience, the authors selected the USA, Germany and Japan as study fields. The reason for this selection is that these countries represent different continents – America, Asia and Europe – being a major contributor to of the world economy. Furthermore, these countries are very different in their culture. This can be easily recognized by comparing the dimensions of Hofstede and Hofstede (2006) as shown in figure 1.

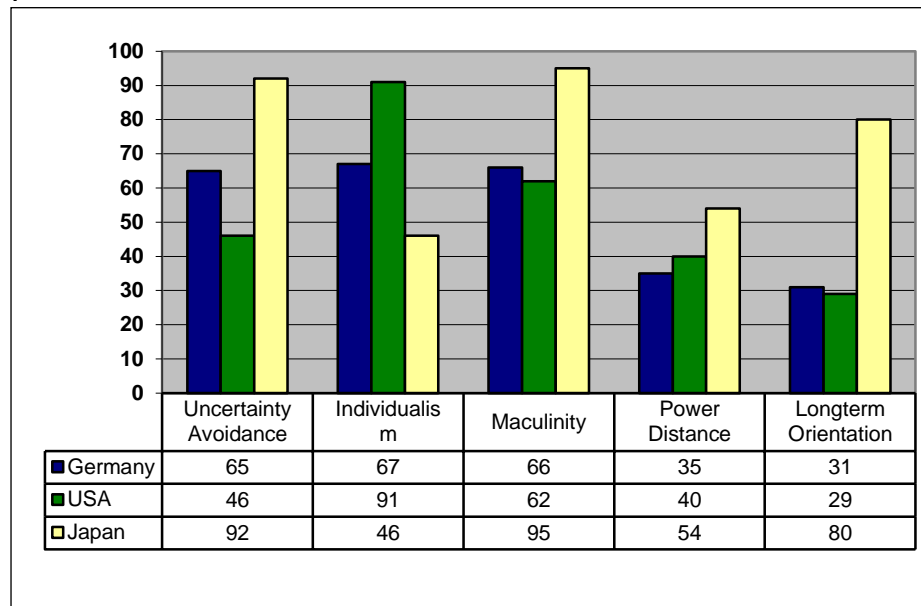


Figure1: Comparison USA – Germany – Japan (Hofstede and Hofstede, 2006)

As to the specific area of research at hand, it is relevant to verify which cultural values influence project management and to provide configuration recommendations for the selected three countries. Literature provides some clues by providing “conflict management” overviews (Swierczek, 1994, p. 42):

Conflict Issues	USA	Japan	Germany
<b>Identity</b>	Emphasis on "I"	Emphasis on "we"	Emphasis on "I"
<b>Face</b>	Self face	Others-face concern high	Self face
<b>Motivation</b>	Autonomy	Association	Self-accomplishment and service to society
<b>Conflict emphasis</b>	Direct	Indirect	Direct
<b>Style</b>	Controlling or confrontational	Obliging or avoiding	Controlling or confrontational
<b>Strategy</b>	Competitive strategies	Collaborative strategies	Competitive strategies
<b>Communication</b>	Direct speech/fact	Indirect speech/allusions	Direct speech/fact

<b>Nonverbal</b>	Obvious and direct emotional expressions and reactions	Indirect emotional expressions and reactions	Obvious and direct emotional expressions and reactions
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Figure 2: Overview of US and Japanese conflict resolution

This overview provides the background for a research study targeted at the field of international project management in or across different cultures. The authors undertake to study this area in a broad sense and try to tackle the above mentioned two major questions.

### Study and Findings

Based on the literature research it was derived that the USA, Germany and Japan should differ significantly in certain cultural aspects. To tackle both the gap in the literature with regard to multicultural project management methodologies, and the resulting need for taking strategically relevant action, a study was performed on the selected three countries.

The major research fields were whether (1) the globalization of markets leads to a high(er) number of intercultural projects and whether (2) some cultural factors can be identified that affect project success. In order to practically define project success, we face a major obstacle, as in fact Kellner (2001, p. 15) notes that in practice, “projects were regarded as success, although no product was finished, although the costs were astronomical, although the team constantly lay in the controversy, although clients and the project managers considered themselves mutually with threats and revenge oaths. Where did success lie? The answer: much learned.”

Interpretation possibilities lying between the failure of a project and success are numerous. Many authors have tried to clearly define project success. However, these definitions miss accuracy and practice relevance. If such a definition speaks of any deviation is defined regarding date, budget or quality as unquestionable failure of the project, then it is a little close-to-reality. It is questionable to deny success to a project, which shows deviations within acceptable limit values. The difficulty consists of specifying these limit values.

Largely in line with Brunschede (2000), for this research it was decided that the term “project success” reflects time/budget over/under-run, i.e. differences in project success are measured using the category “time/budget over/under-run”. Also the word “culture” is representative only for the three nations Germany, Japan and USA as only those three nations are object of this study.

## Research Study Design

For an internet survey, individuals with more than one year of experience in national and international project management were sampled in the target countries. The survey used a 6 point Likert scale and closed questions to collect the data. It was available in English and Japanese language, the latter validated by several translation and back-translation loops. The participants were chosen at random. The selection criteria were their personal experiences in the field of international project management.

The survey was accessible among experts in the field of project management and inter-cultural management from different companies. Those persons were contact directly by e-mail, resulting in 650 potential respondents. Further on an article providing information about the research topic including the URL to the web-based questionnaire was provided in different internet forums related to project management. Also several associations published the article including the link in their monthly newsletters. In summary, the article was pliable for more than 156,500 persons (calculating the member counts and the direct e-mails). With the high amount of potential respondents the probability of qualified responses could be increased.

The survey was active for circa two months, as it had been open for 1626 hours and 37 minutes. In total 1.036 filled out questionnaires were submitted. According to the sampling criteria mentioned above, 768 out of 1.036 were considered as valid and usable. The source data were downloaded and formatted in a Microsoft Excel spreadsheet. For further analyses, the database was exported SPSS.

Among the respondents, Germans presented the largest group with 364 respondents (47.4%). The second largest group was the Japanese with 179 participants (23.3%). The third major group was represented by the USA with 162 respondents (21.1%). The other nationalities with 63 participants (8.2%) completed the picture. They were used only if they participated in clearly assigned projects.

## Multinational Projects

Asked about the relevance of international projects, as expected 668 (87.88%) of the participants stated, that international projects had a high importance for the company. Only 68 (8.95%) reported, that international projects had low importance for the company and just 24 (3.16%) stated, that there is no importance.

Along the same pattern, nearly three-fourths of the participants 567 (74.61%) stated that the number of international projects is increasing. Just 176 (23.16) respondents reported, that there is a neutral trend towards the number of international projects and 17 (2.24%) participants felt, that the importance of international projects is decreasing.



## Project Success

As outlined, project success for this study has been defined as (lack of) time/budget (over-/ under-runs). The following paragraphs outline the related characteristics in this sample, starting with an analysis by nationality of the respondent.

		Please specify the Time over/ under-run	Please specify the Budget over/ under-run
Nationality	Correlation Coefficient	.246**	.294**
	Sig. (2-tailed)	0	0
	N	518	518
**. Correlation is significant at the 0.01 level (2-tailed).			

Table 1: Respondent Nationality

Table 1 shows the relationship between the respondent's nationalities versus time/budget over-/under- run. A small association between the variables can be found. The variables are statistically significant ( $p = .249/.294$ ,  $p = .000/.000$ ,  $n = 518$ ). The  $H_0$  is rejected.

Respondents were drawn from companies with varying levels of operations for which they did their last international project. At the higher end, 434 (57.33%) of the participants represented global companies. Further, 238 (31.44%) respondents were drawn from international companies. Another 61 (8.06%) came from national companies. The remaining 24 (3.17%) responded, that they do not know or did not want to answer. It can be pointed out, that nearly 90% of the respondents participated in a company which is operating in a global respectively in an international environment.

		Please specify the Time over/ under-run	Please specify the Budget over/ under-run
Type of Company for which you did your last International Project	Correlation Coefficient	-0.025	-0.03
	Sig. (2-tailed)	0.572	0.489
	N	518	518

Table 2: Company Type

Table 2 shows the relationship between the type of the company and time/budget over-/ under-run. There is a small negative association between the variables, but there is no linear relationship and the variables are not statistically significant ( $\rho = -.025/-.030$ ,  $p = .572/.489$ ,  $n = 518$ ). Therefore the  $H_0$  is not rejected. This finding is interesting, given that one would assume that the related complexity of the organisations could have an influence on project success.

The data show different results when checking for the type of industry for which the respondent did the last International Project. Respondents companies represented a diverse range of industries. At 19.95 % and 18.50 % respectively, automotive and IT were the industries best represented. The remaining 60% were split into 14 different industries, such as Telecommunication (9.58%), Consulting (8.40%), Engineering (6.96%), Consumption Goods (6.56%), Banking/Finance (6.43%), etc.

		Please specify the Time over/ under-run	Please specify the Budget over/ under-run
<b>In what Industry is this company active for which you did your last International Project</b>	Correlation Coefficient	.096*	.084*
	Sig. (2-tailed)	0.028	0.05
	N	518	518
*. Correlation is significant at the 0.05 level (2-tailed).			

Table 3: Industry

Table 3 shows the relationship between the type of industry and time/budget over/underrun. There is a very small association between the variables. This expresses that no linear relationship among those variables exist ( $\rho = .096/.084$ ). Based on the p-value ( $p = .028/.050$ ), this relationship is statistically significant,  $H_0$  is rejected. Hence, there is a statistically significant relationship between the kind of industry which the particular subject belongs to and time/budget over-/under-run – different from the above findings for the company type.

Taking a different perspective, the answers have been analysed by country from which the majority of the project members come from. With respect to the nationality of most of the team members, 180 (31.03%) participants worked together with main project members from Germany. 161 (27.76%) respondents worked together mainly with project members from the USA and 138 (23.79%) with members from Japan mainly. The picture is completed by 101 (17.41) participants who worked together with main project members from several nationalities “others”.

		Please specify the Time over/ under-run	Please specify the Budget over/ under-run
<b>The majority of the project members come from which country</b>	Correlation Coefficient	.417**	.449**
	Sig. (2-tailed)	0	0
	N	440	440
**. Correlation is significant at the 0.01 level (2-tailed).			

Table 4: Project Members Nationality

Table 4 shows the relationship between the nationality of the project members and time/budget over/underrun. In this case there is a medium positive association between the variables which is statistically significant. The  $H_0$  is rejected.

Furthermore, detailed data analysis shows that the cultural background of the members in a project team has a stronger influence than the nationality of the individual who has completed the questionnaire as shown in Table 1. It can thus be recommended to base evaluations on “nationality of the majority of the project members” and not the individual respondents’ nationality, as the project team nationality had a greater numerical impact in terms of the correlation coefficient on the project success compared to the respondents’ nationality.

As to the duration of the last international project the respondents have been involved in, 246 (42.34%) of the participants worked in a project lasting 6-18 months. Another 167 (28.74%) have worked within a duration of 18-36 months. Finally, 88 (15.15%) participants worked in a project lasting less than 6 months and 80 (13.77%) participants worked in an international project which lasted more than 36 months.

		Please specify the Time over/ under-run	Please specify the Budget over/ under-run
<b>What was the duration of the last International Project</b>	Correlation Coefficient	.349**	.338**
	Sig. (2-tailed)	0	0
	N	518	518
**. Correlation is significant at the 0.01 level (2-tailed).			

Table 5: Duration

Table 5 shows the relationship between the duration of the last international project and time/budget over-/ under-run. There is a moderate association between the variables. There exists a moderate linear relationship among those variables ( $p = .349/.338$ ). Based on the p-value ( $p = .000/.000$ ), this relationship is statistically significant for  $n=518$ .  $H_0$  is rejected.

### **Time/Budget Over-/Under-runs: A Cross-National Deepdive**

The sample data show that over 75% of the projects had a time delay. 164 (28.23%) of the participants stated, that in their last project a 20% to 49% delay in time occurred. Another 138 (23.75%) stated, that they had to face a time over-run at 50% to 99% level. Furthermore 84 (14.46%) faced a time delay between 10% to 19%. 63 (10.84%) of the participants even had to experience an overrun of >100%. On the other side for 101 (17.38%) participants, the project was finished in time. 21 (3.61%) of the respondents experienced a time under-run of 10% to 19% and 7 (1.2%) reported a time under- run of 20% to 49%. 3 (.52%) respondents had a 50% to 99% time under-run in their last project.

From the overall data it can be pointed out, that mainly the US-Americans could achieve a time under-run. On a second look, it also can be stated, that the Germans had an almost equal allocation at 0% to 49% level of time delay, which gets less beginning from the 50% level. Finally it has to be noted, that the Japanese had no major under-run in time, they mostly faced a time delay.

As to the second success criterion, data show that over 75% of the projects had cost overruns. 134 (23.06%) of the participants stated, that there were a 50% to 99% cost overrun in their last project. Another 128 (22.03%) stated that they had to face higher costs at a 20% to 49% level. Furthermore, 114 (19.62%) faced cost overruns between 10% to 19%. 53 (9.12%) of the participants even had to experience an overrun of >100%. On the other hand, for 107 (18.42%) participants the project was finished in time. 27 (4.65%) of the respondents experienced an under-run in costs of 10% to 19% and 15 (2.58%) reported an under- run of 20% to 49%. 3 (0.52%) respondents who worked in a project which had a 50% to 99% cost under- runs in budget.

Looking at the budget under/over-run by the nationality of the team members, it can be pointed out, that mainly the US-Americans and Germans could achieve an under-run in budget. On a second look it also can be stated, that the Germans had an almost equal allocation at 0% to 49% level of cost overrun, which gets less beginning from the 50% level. Again it has to be noted, that the Japanese had only a small share at the budget under- run, they mostly face a cost overrun. This similarity to the time delay results leads to the question, whether success is correlated along the two defined criteria.

		<b>Please specify the Time over/under-run</b>
<b>Please specify the Budget over/under-run</b>	Correlation Coefficient	.762**
	Sig. (2-tailed)	0
	N	440
**. Correlation is significant at the 0.01 level (2-tailed).		

Table 6: Correlation of over-/under-runs

Table 6 confirms this expected result, as it shows the relationship between the variable time over-/ under-run and budget over-/under-run. There is a high positive association between the variables and the relationship is statistically significant ( $\rho = .762$ ;  $p = .000$ ;  $n = 440$ ). Therefore  $H_0$  is rejected.

Respondents from all three countries stated time over-runs. The Japanese respondents had to face an average time overrun of 49.02% and the US-American respondents stated, on average, the lowest time overrun (23.45%), just closely followed by the German respondents' statements (24.06%). Budgets follow a similar pattern. Respondents from all three countries stated a budget over-run. The Japanese respondents stated an average overrun of 47.80% and the Germans respondents stated, on average, the lowest budget overrun (20.04%), just close to the US-Americans respondents' statements (20.59%).

The next table takes a deeper look into the issue of time/budget over/ under- run. Here the nationality of the respondent in combination with the nationality of the majority of team member he worked with at his last international project is set into relation to time/budget over-/ under-run.

Mean – Report			
Nationality	Nationality of the team members	Time over/ under-run	Budget over/ under-run
German	USA	17.29	13.29
	Germany	23.59	16.72
	Japan	48.15	58.15
	Others	21.67	17.5
US-American	USA	14.78	15.43
	Germany	21.07	11.79
	Japan	49.13	46.52
	Others	18.57	16.19
Japanese	USA	20	18.4
	Germany	22.86	15.71
	Japan	59.52	59.76
	Others	53.75	43.75
Other	USA	15	13
	Germany	28.57	26.43
	Japan	44	38
	Others	18.33	12.5

Table 7: Overview of the average of the time/budget over/ under- run subdivided by the nationality of the participant and the nationality of the team members

Based on the source data described in above table, a solely US-American project team obtains the lowest average time over-un (14.78). Americans working within a German team stated the lowest average budget over-run (11.79), but also face bigger time over-runs than homogenous US-American teams (21.07). A solely Japanese project team obtains the highest average time/budget over-run (59.52/59.76). Homogenous German teams seem to work closer to schedules and budget targets than Japanese teams, but still are outperformed by American teams. Mixing teams has various effects that can hardly be systematized, but there is a central tendency that American respondents embedded in multicultural project teams answered most optimistically towards time/budget over-runs.

As for budget over-runs, Germans seem to have a positive effect on US-American project teams (13.29) and vice versa (11.79). US-American respondents answered that their budget performance (46.53) is better than is the case for solely Japanese teams (59.76), whereas respondents from Germany state a similar time performance to homogenous Japanese teams (58.15). According to the respondents' answers, mixing/adding Germans or US-Americans has positive effects on Japanese project teams as average time over-runs are reduced from 59.52 to 48.15/49.13.

## Limitations and further Research

Several limitations apply to the study, thus providing avenues for further research. First of all, the focus of the collected data was limited to three countries (Germany, Japan and USA) and due to that, the generalizability of the results for other countries cannot be taken for granted. Therefore, future cross-cultural research on project management should be performed on a broader scale, considering other countries and focussing on collecting data from a larger population of project managers, project team members, stakeholders and others within each country that will permit more specific assessments of the criteria used for cultural comparison and their characteristics.

Secondly, the analysis of the data and the explanation of the findings are based on Hofstede's dimensions of national culture and the selected project management standard. Other cultural theories and methodologies have to be evaluated in order to tackle this issue and to support the findings of this research.

The third limitation of this research is the assumption of the culture homogeneity. The importance of subcultures is not denied, but was not in focus. Further, the pre-knowledge about and experiences with other cultures of the respondents were not taken into account. This implies also that it was assumed that "culture" is a parallel phenomenon to "nation" which means it was supposed that there is some "national culture", i.e. a homogeneous culture within a country that ends with its political border. This also relates to the reference made to Hofstede's research (Baskerville, 2003).

A fourth limitation is the allocation of industry which showed that more than 38% of the respondents work in the automotive/IT sector. This significant share of respondents from above sectors let assume that the drawn conclusions from this research might be different for other populations. Hence, future research should imply a different distribution among various industries.

The fifth limitation is given by the way the survey was accomplished. This study was not an accompanying study to document the project development it used a self-completion questionnaire which asks for self-assessment. The reliability of any self-evaluation is questionable, due to the fact that self-evaluation might be different among cultures (Zwikael, Shimizu and Globerson, 2004). The variable "changing self-perception across cultures" was not controllable in this research. A possible suggestion for future avenues could be a change of research method.

Limitation six is that the project budget/time over-/ under-run was chosen as a measure for project success This might be a limited measure for project success. One has to be aware that a project which produces a high quality product might lead to subsequent contracts, a business partnership and in the long run to a high outcome –despite that the project at the first sight had to face a time/ budget overrun. Zwikael, Shimizu and Globerson (2005, p. 457) also considers "technical performance" and "customer satisfaction" to be relevant dimensions as a measure for project success. By adding dimensions of project success, the overall project outcome could change and the measured project success could end in different results for the USA, Germany and Japan. In order to tackle this issue, it is suggested

to develop and use standard criteria to measure project success. Further research could develop and imply standard criteria to measure project success.

Seventh and last limitation is depending on the data collection selected; specific limitations do also apply to the samples, in both scope and size. It was mentioned per sampling criteria, that all respondents already have minimum one year of international experience in international projects. Results for project members with a different cultural background or less than one year of experiences in international projects might well deviate. Furthermore, in the sample Germans (364) outnumbered American (162) and Japanese (179) participants. A sample with more American and Japanese would have been desirable.

Concluding, it has to be stated, that a further development towards even more global value-chains and markets will also generate new research needs. Further research in this direction will reduce cultural misunderstandings, increase employee morale and generate social capital (Arenius, 2005). It promises to improve competitive advantage for companies that are involved in international projects. As a result, labour and capital productivity on projects will increase dramatically, if a comprehensive cultural framework can be developed in the future.



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