

Cross-Cultural Management in the Corporate Strategies of High-Tech Companies

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Abstract: Cross-cultural management is a concept originating from the American civil rights movement and gradually taking root in Europe. It was originally conceived as a means of ensuring equal rights, which has become a management tool used to leverage human resources. In both cases, in the United States and Europe, companies have to operate under the influence of global markets, which, on the one hand, form intensified competition in the domestic market, and on the other hand, offer opportunities to enter new markets and benefit from the advantages of production and development process. High-tech companies operating globally today must be assertive in different markets with different cultures. In addition, the corporate structure should be adjusted to a very dynamic and heterogeneous environment: a rigid hierarchy within long communication chains must be replaced by flexible systems that can quickly adapt to new conditions and anticipate future changes even more efficiently. In order to be able to survive in a global competitive environment, resources must be used as efficiently as possible, as well as flexibly, and this also applies to the company's personnel. Employee's know-how and skills are important in high-tech industries, and their combination and focus on practical application are the criteria for success in rendering innovative products and services.

Key words: cross-cultural management, high-tech companies, corporate strategies

JEL codes: F, M5, O

1. Cultural Diversity and Cross-Cultural Management

Diversity describes “different qualities or rather everything that makes people different or similar to each other” (Paivand Sepehri, 2010). Diversity and variety mean a wide range of opportunities to describe people, such as age, gender, gender identity, origin, religion, social class. Cultural diversity distinguishes culture, whether in terms of nation, region, ethnic group or religion. Cross-cultural management was developed as a practical concept dealing with diversity in all its aspects. Cross-cultural management is aimed at increasing motivation and creativity of personnel through different layers to support corporate strategy. Cross-cultural management focuses on the best practices of dealing with cultural heterogeneity, which is especially important for companies, in the globalization process. Diversity is characterized by a wide range of qualities: on the one hand, it promotes a significant amount of valuable skills and knowledge to ensure creativity and innovation, as well as accuracy and customer orientation.

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On the other hand, differences, in particular cultural ones, may result in misunderstandings and loss of closeness. One of the managerial aspects of diversity is conflict prevention, or accordingly finding meaningful solutions. However, if efforts are halted, the huge potential will remain untapped. Therefore, diversity should be considered as a resource to be involved in the strategic activities of the company. The corporate perspective reveals a huge number of divergent views of cultural diversity and managerial cultural diversity, which differ from the above concept depending on the location, industry, scope, history and international positioning of the company. Connotation, which is a conflicting focus that pushes managerial diversity into a rather unpleasant situation, is particularly common; it is only intrinsic to the companies and countries affected by ethnic and other conflicts. This review makes it possible to focus on particular conditions in a specific situation by comparing countries. In addition, it discusses the position of German companies. The study also points out the contradictions between intent and reality, the dichotomy characterizing the actual application of diversity.

2. Cultural Diversity and Cross-Cultural Management in the Context of International Competition

From a historical perspective, the concept of “diversity” spread differently in each country and in each company individually. To analyze cultural diversity and cross-cultural management in the context of international competition, statistical data were taken from the relevant groups of Germany, the United States, the United Kingdom, other European countries and others, which distinctively differ from each other (Figure 1).

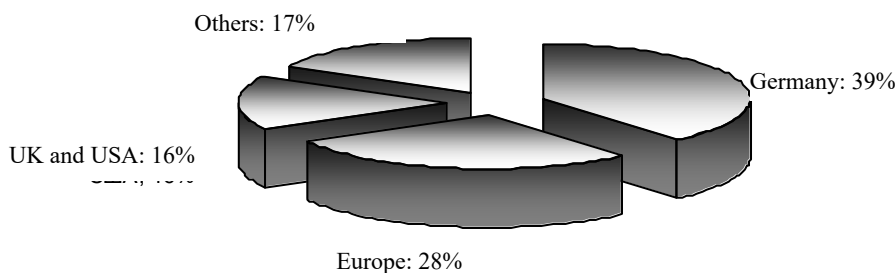


Figure 1 Distribution of High-tech Companies in Four Regions

About 60 percent of the selected companies are engaged in the manufacturing industry, 40 percent belong to the service sector (Figure 2).

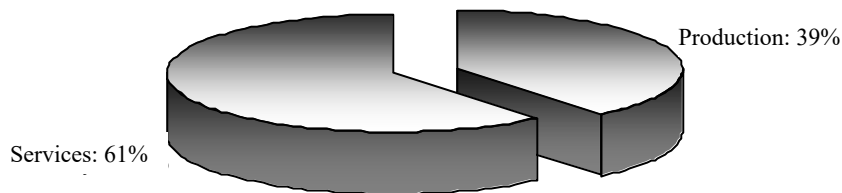


Figure 2 Distribution of Production and Service Companies Across Global Markets

In terms of company size, medium and large companies were selected, where 65 percent of companies have more than 20,000 employees, 35 percent have a smaller number of personnel (Figure 3).

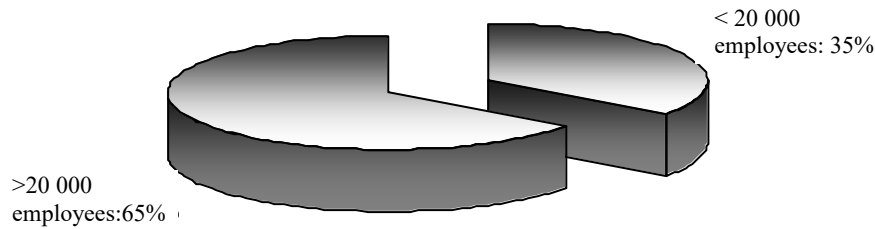


Figure 3 The Size of the Company Depending on the Number of Employees

Taking into account the effect of the demographic and socio-cultural factor, it can be assumed that the relevance of the age aspect, disability, gender, cultural background and religion, the concept of “diversity” will vary in different countries and companies. These six parameters correspond to the categories of the two EU directives (Council of the European Union, 2000).

In the course of the study, it becomes clear enough that gender plays an important role across borders in all countries. On a scale from 0 (no priority) to 7 (highest priority), age, culture, disability has reached an average of 4 or even 5 (Figure 4). Religion, in turn, is of secondary importance.

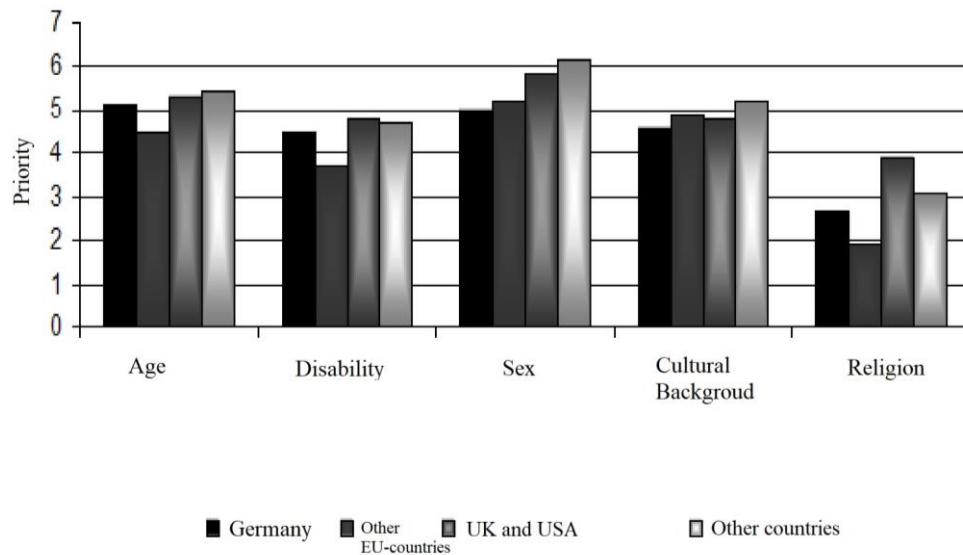


Figure 4 Cross-Cultural Factor Prioritization Across Global Markets

Comparison of the results for each of the countries shows that the companies in other states of the world set the significance of culture much higher than German companies. Although the share of foreigners among the local population was 8.8 percent according to the Federal Statistical Office of Germany in 2010, this shows that the problem of cultural diversity in Germany does not receive as much attention as in other countries. Figure 5 illustrates the share of the companies' staff in terms of their cultural background.

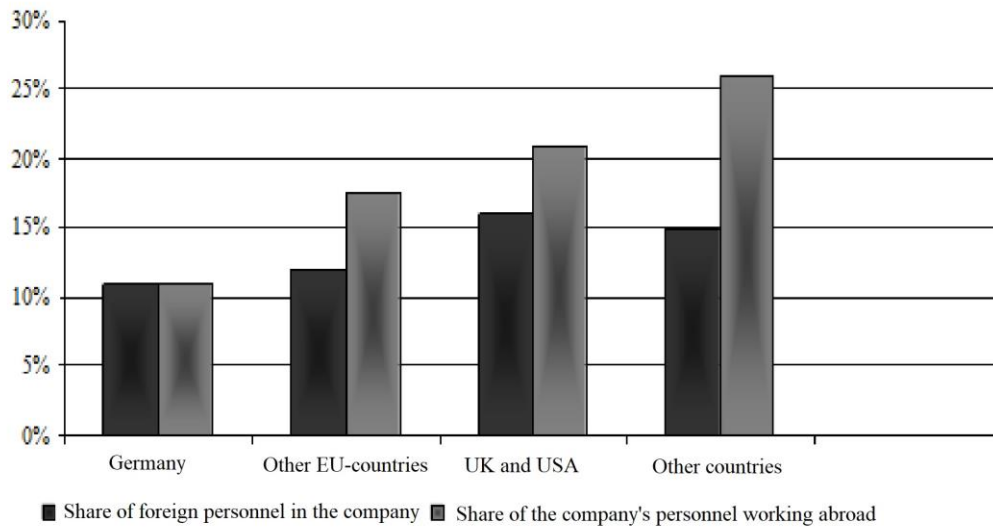


Figure 5 Cross-Cultural Diversity of High-Tech Companies Employees (as a Percentage, Depending on the Region)

According to this diagram, it can be seen that German companies have the smallest share of foreign citizens working in Germany and German citizens working abroad (11%). Percentages in all other countries are much higher. This explains why culture as a function of diversity has such a low rating, as shown in Figure 4.

It should be noted that in large companies, regardless of nationality, there are more foreign employees than in small companies (Figure 6). In this selection, the large companies are the companies with more than 20,000 employees.

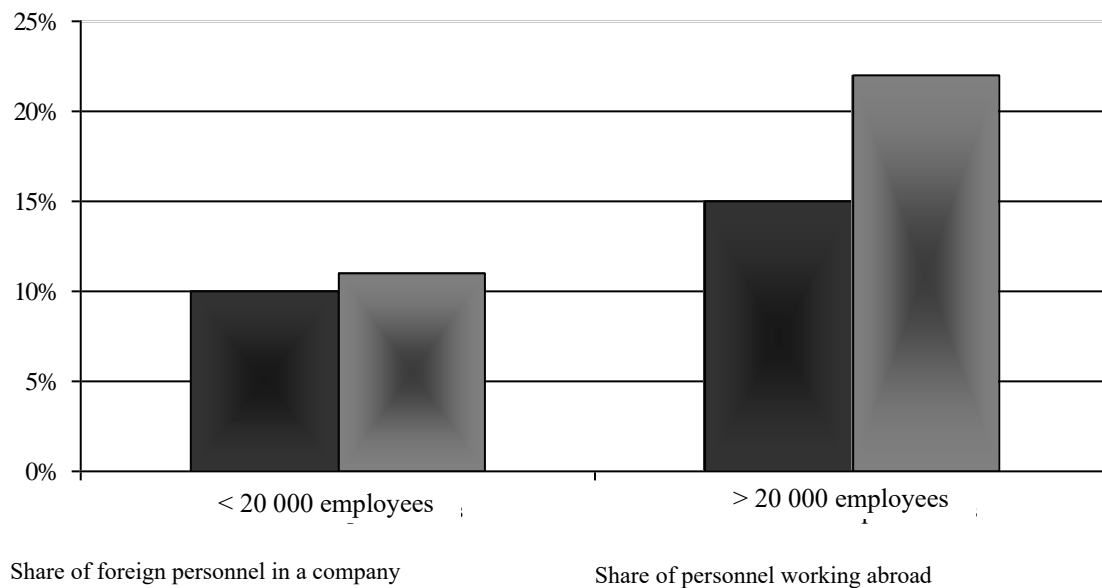


Figure 6 Cross-Cultural Diversity of High-Tech Companies' Employees (as a Percentage, Depending on the Size of the Company)

Thus, summarizing the analyzed data, we plot a histogram of the distribution of the companies cross-cultural diversity in the context of high-tech development (Figure 7).

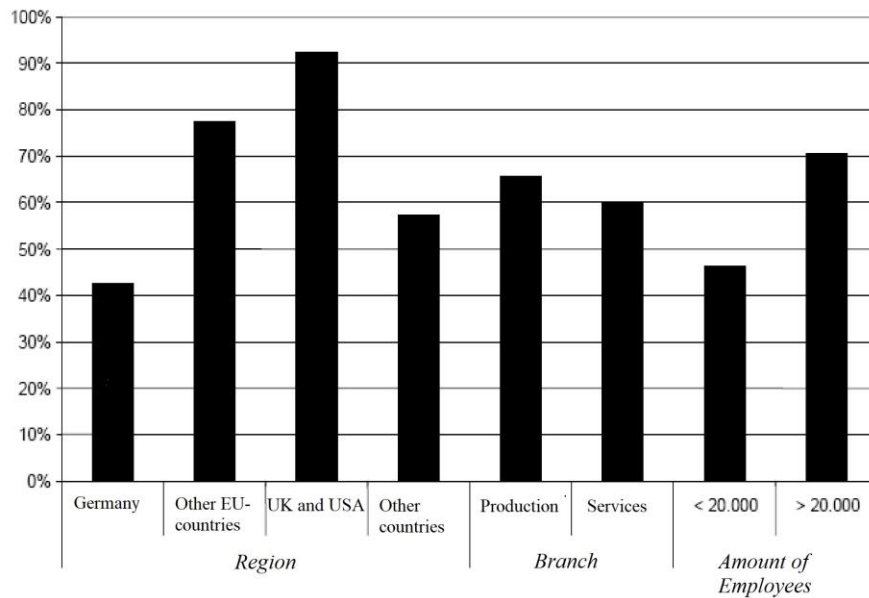


Figure 7 Cross-Cultural Diversity Distribution (By Region, Industry, Number of Employees)

According to the results obtained, it can be concluded that the cross-cultural factor and its interpretation should be considered within different aspects, depending on the context, i.e., the cross-cultural management should be regulated taking account all factors. This means that each high-tech company operating in an international competitive environment must develop a concept focused on the needs of cross-cultural management considering national and corporate aspects, as well as the peculiarities of the local mentality.

3. The Main Benefits of Cultural Diversity and Cross-Cultural Management in High-Tech Companies

When implementing cross-cultural management in the company's development strategy, a lot depends on whether cultural diversity is considered as a means of growing the profit. That is why the dependence of the profitability of the company with cultural diversity and cross-cultural management was thoroughly studied. To get such a result, a total of 14 items were grouped in four dimensions based on factor analysis (Table 1). The results of the clusters obtained are: demographic constraints, customer orientation and entry into global markets, cooperation and international success, as well as reducing conflict and customer satisfaction.

Highlighted clusters are also supported in the paper by Eli/Thomas (2009), where companies are divided into:

- those that have implemented cross-cultural management to increase equity and reduce discrimination;
- those who plan to enter the global market using the strategy of hiring international staff;
- those with a focus on promoting and encouraging further development.

Table 1 Advantages of Cross-Cultural Management in the International Competitive Environment (By Clusters)

No.	Item	Cluster
1	Cultural diversity has no advantages, but inevitably emerges for demographic reasons.	Demographic constraints
2	The needs of heterogeneous target groups can be met more effectively by the members of their own culture.	Customer focus and global markets
3	International markets are more easily taken by the employees who are ethnic residents of these countries.	
4	Local employees are more capable of developing products according to local needs.	
5	Using a cross-national recruitment policy, the company can position itself as a global player in the international markets.	Cooperation and Success in International Markets
6	The intercultural competence of a company will improve as a result of the daily interaction of the personnel cultural diversity.	
7	The cultural diversity of the employees provides wider perspectives and experience, as well as creative problem solving.	
8	International project teams are more effective in solving international problems.	
9	The use of cross-cultural staff makes it possible to introduce new models of thinking and behaviour into the corporate culture.	
10	The number of conflicts caused by cultural differences is decreasing.	Conflict Management and Staff Satisfaction
11	Increasing Employees Satisfaction	

The selected companies that were analysed according to a five-step scale (from “fully refers” to “does not refer at all”, see Table 2). In this ranking, cooperation and international success are considered the most important advantages in the implementation of cross-cultural management and cultural diversity in all countries, industries and companies of all sizes: the development of intercultural competence, improving creativity in solving issues through the use of different points of view, improving performance and productivity in international projects for the integration of international experts and local background, ultimately enhancing the company's reputation from the perspective of an international player in global markets.

As for the second largest indicator of benefit, German and American/British companies differ as follows: in terms of rating of the “customer orientation and entry into new markets” indicator, German companies have a slightly higher priority in the rating compared to American/British companies. Unlike the first indicator, American /British companies significantly outpace German companies in terms of reducing conflicts and satisfying employees. This may explain the more powerful socio-political background that influences the situation in the US and the UK, which have a strong impact on discrimination and fairness. This assumption is also confirmed by Goebel’s (2003) paper. German companies seem to be more result-oriented in their company policies and strategies and rank second. This confirmation is also justified in a paper by Sepera (2002), namely that there is a correlation between the notion of a cross-cultural management and cultural diversity of the company’s staff: the less cultural diversity of staff, the stronger the tendency of focusing on the outcome for the economic success of the company. In fact, German companies account for the largest share of the companies that see cultural diversity as a result of demographic constraints, which implies no added value.

Figure 8 shows the results of the cluster analysis, which indicates that some companies take into account all three points of view (35%), but most of them disagree and give priority either to customer orientation and entry into new markets (32%), or to cooperation and international success (33%).

Table 2 Evaluation of the Effectiveness of the Cross-Cultural Management Implementation
(in Average; 5 - Full Consent, 1 - Disagreement)

	Cooperation and Success in Global Markets	Customer Orientation and Entering New Markets	Reducing Conflict and Staff Satisfaction	Demographic Constraints
Germany	4.2	4.1	3.6	2.9
Europe	4.3	3.4	3.4	2.4
UK+USA	4.3	3.6	4.0	2.1
Other countries	4.1	3.7	3.6	2.4
Production	4.2	3.7	3.7	2.3
Services	4.2	3.8	3.5	2.7
< 20.000	4.1	4.0	3.4	2.6
> 20.000	4.3	3.7	3.7	2.4
Total	4.2	3.8	3.6	2.5
SD	0.65	0.72	0.74	1.15

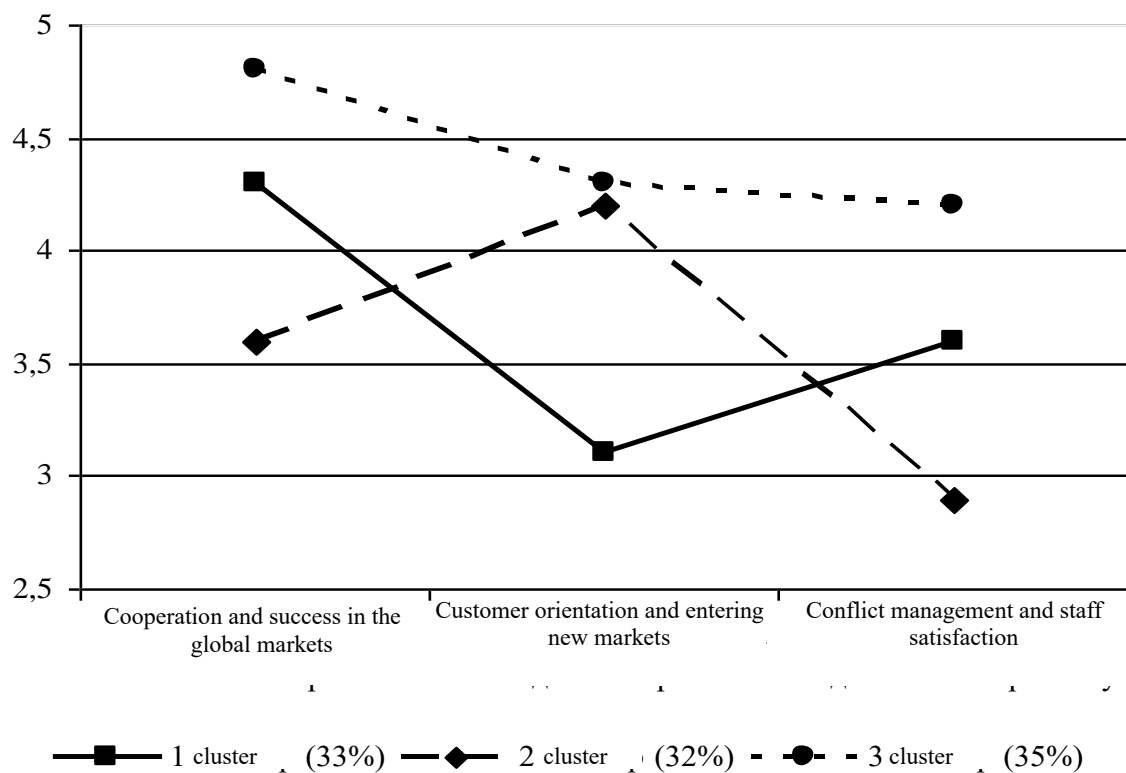


Figure 8 Cluster Analysis Based on Three Measurements of Efficiency

4. The Main Problems and Difficulties of Implementing Management Tools for Cross-Cultural Management in High-Tech Companies

Profit and benefits are not the only aspect that plays an important part in making a decision on the feasibility of implementing management tools for cross-cultural management. Costs should also be considered. Table 3 summarizes the main difficulties and obstacles faced by the companies in implementing cross-cultural management.

Table 3 The Main Difficulties and Problems of Implementation of Cross-Cultural Management

No.	Item	Cluster
1	Cultural differences in the first stages disagree with the existing corporate culture.	Disagreement with corporate culture
2	The orientation on the cultural diversity of the staff shifts the focus on the main criteria for performing the task.	
3	Almost unrecognized by middle and lower management	Recognition Problems
4	Management and staff should be have a knowledgeable about or skilled in intercultural communication.	
5	The introduction of new systems or activities is quite costly.	Complexity and Costs
6	Operational processes become very complex and voluminous.	
7	Cultural diversity matters only to very few departments in the company.	Problems of implementation
8	No experience of effective management of cross-cultural employees working in a team.	
9	There are no step-by-step procedures for the implementation of cross-cultural management.	
10	The methods for implementing cross-cultural management are not known or available.	

Table 3 lists the twelve clauses that have been grouped, highlighting four issues as follows: contradictions of corporate culture, recognition problems, complexity and cost, and problems of implementation. The clause most often considered as a problem is recognition (Table 4).

A comparison of the UK/US and Germany shows that Anglo-Saxon countries face far fewer challenges in implementing cross-cultural management, as these countries have specific tools and therefore have certain experience of applying them. This can probably be explained by the fact that cross-cultural management has been used in the UK and the US for a longer time. However, compared to other regions, the most complex issues that can be faced by high-technology companies are usually faced by the companies in Germany.

Table 4 Assessment of the Main Difficulties in the Implementation of Cross-Cultural Management (in Average; 5 - Complete Agreement, 1 - Complete Disagreement)

	Problems of Implementation	Complexity and Costs	Recognition Problems	Disagreement with corporate culture
Germany	2.9	2.7	3.0	2.7
Europe	2.5	2.5	3.3	2.2
UK+USA	1.6	2.4	2.9	2.6
Other countries	2.5	2.5	3.0	2.5
Production	2.2	2.4	3.0	2.3
Services	2.7	2.7	3.1	2.6
< 20.000	2.7	2.7	3.0	2.5
> 20.000	2.4	2.5	3.1	2.5
Total	2.5	2.6	3.1	2.5
SD	1.05	0.79	0.86	0.89

Table 4 shows that companies give a much higher point to measuring profitability — almost one or two points on a scale. According to these data, it can be concluded that each company is fully convinced of the feasibility of a cross-cultural management system, but as indicated in the paragraphs above, this is true only for 44 percent of German companies. This can be justified by two explanations. The first one, as stated by the head of the HR department, who is knowledgeable about the process of implementing cross-cultural staff management, the middle management understands the feasibility of using intercultural staff, while the top management does not understand this, so the operational level is limited in its actions.

Another explanation is the focus on getting the reputation of a social company. That is, the top management of the company only considers the introduction of cross-cultural staff to create an image of the politically correct orientation of the company, but the real implementation remains at the level of a concept.

5. Implementation of Cross-Cultural Management in High-Tech Companies

The main sectors of implementation of cross-cultural management are listed in Table 5. Figure 9 clearly shows how the concept of “diversity” is firmly established in the policies of UK and US companies. In areas such as human resources management and public relations, cross-cultural management accounts for 100 percent of operational activities, even in technical areas such as supply chain management and production it is applied by 67 percent of the surveyed companies. Human resources management in the cross-cultural management system in Europe and Germany is on a very high level of 90 percent. In Germany, strategies and management processes, in particular, have high rates — this also explains the fact that the main task of cross-cultural management is considered to be the development and entry into new global markets.

In addition, when the spheres of production and services is compared, the results show that production companies use cross-cultural management more effectively, and hence increase the profitability of companies.

Table 5 Evaluation of the Cross-Cultural Management Implementation in the Management System of a High-Tech Company

	Germany	Europe	UK+USA	Other countries	Total
Functional industries					
Process strategy	88%	70%	92%	64%	79%
Personnel Systems	93%	91%	100%	79%	91%
Marketing	86%	77%	85%	86%	83%
Supply management	48%	59%	69%	50%	55%
Production systems	36%	52%	62%	43%	46%
Research & Development	56%	59%	69%	43%	57%
Finance / Accounting	24%	45%	38%	36%	35%
IT and Organisation	36%	45%	46%	57%	44%
Cross-Functional Industries					
Stream Processing	62%	45%	77%	50%	57%
Knowledge of the Company Management	86%	87%	85%	50%	80%
Information Systems	72%	70%	92%	79%	76%
Internal communications	83%	77%	92%	86%	83%
Public Relations	82%	77%	100%	77%	83%
Project Management	67%	59%	77%	50%	63%

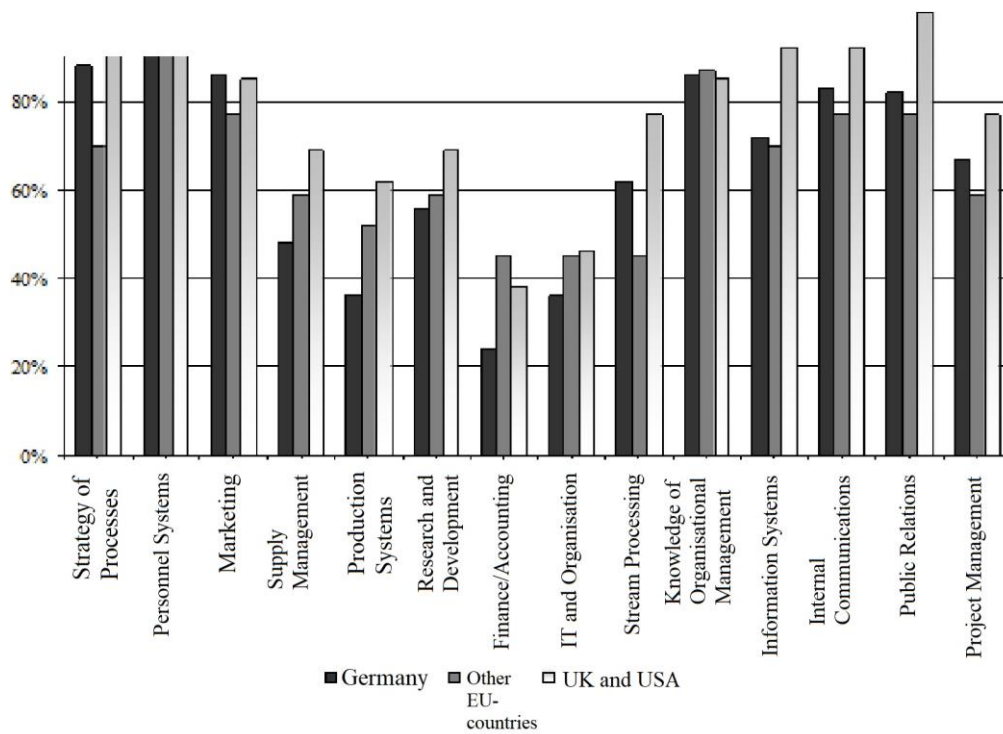


Figure 9 Evaluation of the Cross-Cultural Management Implementation in the Management System of a High-Tech Company

The set of tools required for the implementation of cross-cultural management at the level of project groups and personnel in high-tech companies is provided in Table 6.

Table 6 The Main Cross-Cultural Management Tools Used by High-Tech Companies

	Cross-Cultural Working Groups	Information events	Development of cross-cultural communication skills	Personnel trainings	Company management trainings	Exchange programs, participation in international projects	International HR policy	International relations
Germany	12.9%	25.8%	9.7%	48.4%	48.4%	93.5%	22.6%	83.9%
Europe	43.5%	52.2%	17.4%	69.6%	34.8%	73.9%	17.4%	73.9%
UK+USA	84.6%	69.2%	30.8%	76.9%	38.5%	46.2%	30.8%	46.2%
Other countries	41.7%	33.3%	25.0%	41.7%	58.3%	75.0%	41.7%	50.0%
Production	36.7%	32.3%	19.4%	77.4%	51.6%	80.6%	22.6%	74.2%
Services	37.5%	47.9%	16.7%	45.8%	39.6%	75.0%	27.1%	66.7%
< 20.000	18.5%	22.2%	11.1%	40.7%	37.0%	92.6%	18.5%	77.8%
> 20.000	Main cross-cultural management tools 48.1%	51.9%	21.2%	67.3%	48.1%	69.2%	28.8%	65.4%
Total	38.0%	41.8%	17.7%	58.2%	44.3%	77.2%	25.3%	69.6%

Analysis of the results shows that UK/US high-tech companies have structurally institutionalized cross-cultural management, where the cross-cultural factor is much higher: cross-cultural working groups, information events and trainings ensure conditions where available resources can be fully and effectively used. This approach in consolidating the correctness of relations in corporate culture is also considered in the papers by Bertelsmann (Köppel Petra, 2007), who believes that entering global markets is impossible without the mandatory implementation of cross-cultural management, especially in high-tech companies. Analysing the data of a German company, it can be concluded that the most important tools of cross-cultural management are the exchange programs and participation in international projects (93.5 percent), as well as international relations (83.9%). While less than 50% are allocated for information events and skill development. Analysing this gap, it is clear that focusing on practical introduction only without a theoretical basis can lead to a misunderstanding by the company's personnel of the need to introduce a cross-cultural strategy when entering global markets, as well as promoting the development of stereotypes and increasing conflicts.

A hypothesis formulated by Allport once again proves that the generally formed structure should lead to intercultural learning and fruitful cooperation.

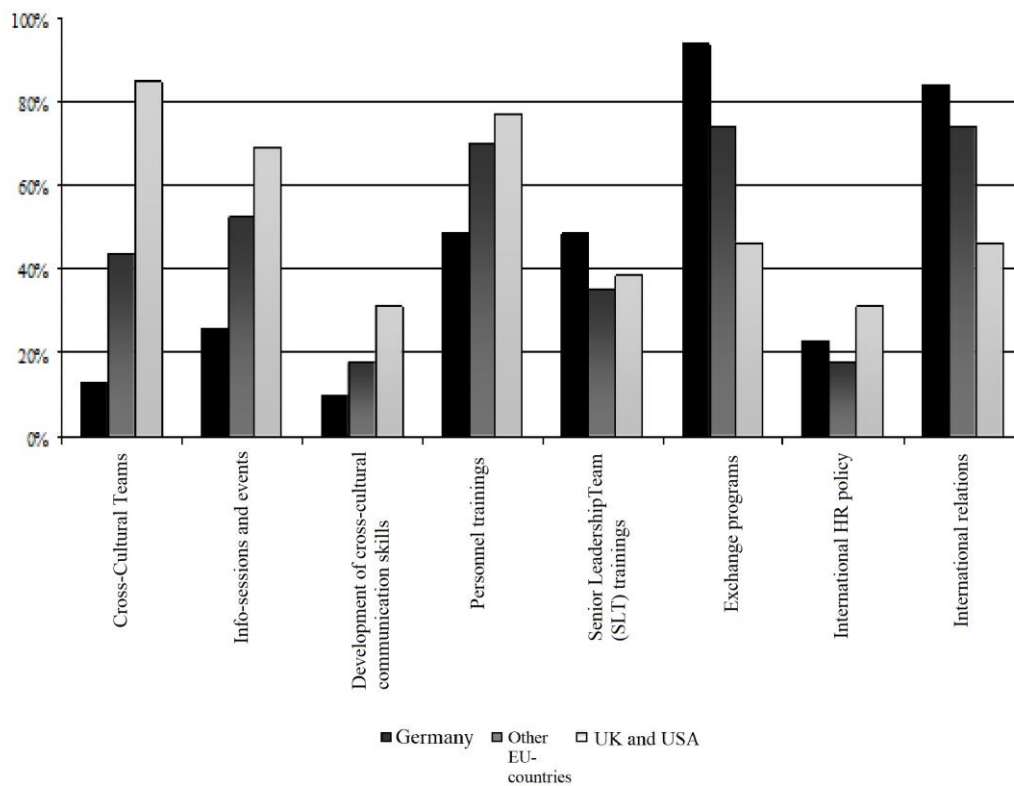


Figure 10 Main Cross-Cultural Management Tools Applied In High-Tech Companies

6. Expected Results of the Cross-Cultural Management Implementation in High-Tech Companies

In order to understand whether cross-cultural management is practiced only for socio-political reasons, or only

for economic gain, the impact of cross-cultural management on corporate success should be analyzed. For this purpose, corporate success was split into four categories: company profit, customer satisfaction, value of the company's shares and the company's image. Figure 11 clearly shows the positive trend of at least one of the above-mentioned success factors in the implementation of cross-cultural management.

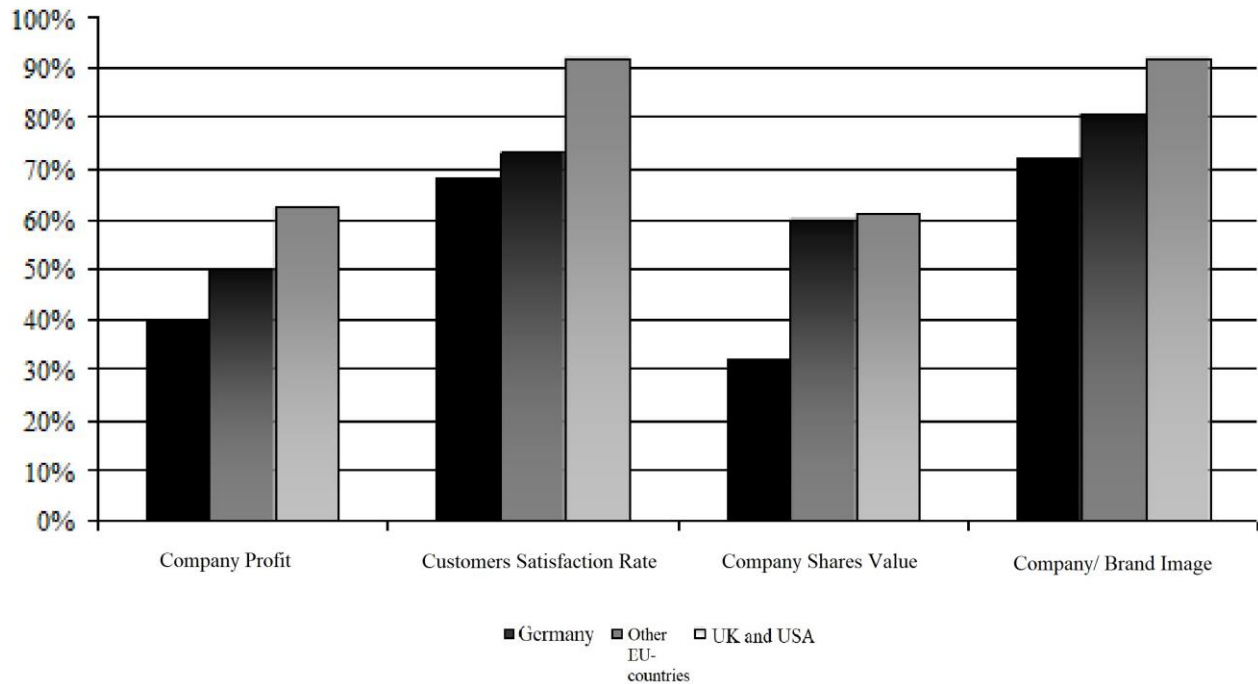


Figure 11 Expected Result of the Cross-Cultural Management Implementation in the Corporate Strategy (Depending on the Region)

However, it is also noticeable that companies in all other regions experience a positive effect more distinctly than the companies in Germany. Thus, confidence in the effectiveness of cross-cultural management is less common in Germany than in the countries of origin. Another pronounced trend is expressed in a more intense impact on the mitigating factors of customer satisfaction and the company's image, in comparison with a less intense result of the harsh factors of the company's and shareholders' profits. Thus, 72 percent of German high-tech companies believe that cross-cultural management has the greatest impact on the company's image, 67 percent see a positive effect in customer satisfaction, 41 percent note growing profits of a company, 34 percent — the value of the company's shares.

Analysing the expected result of the introduction of cross-cultural management in the corporate strategy, depending on the production and service sector, no difference was found between the two indicators. In terms of the size of the company, large companies experience greater positive impact of cross-cultural management than the small ones. A particularly wide divergence regarding share value may be due to the fact that small companies, typically family-owned, do not have a shareholder interest.

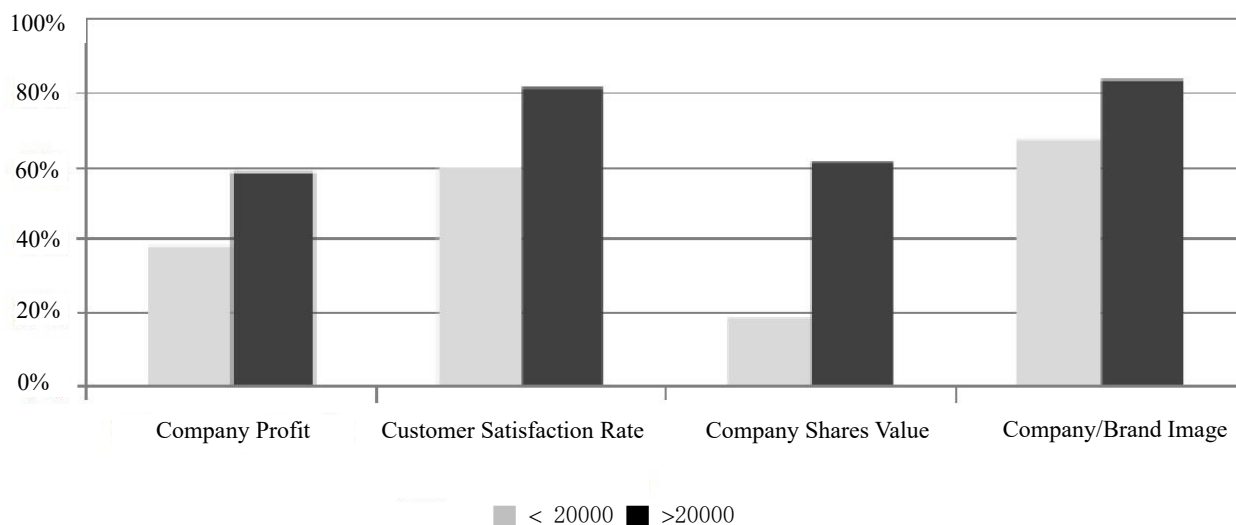


Figure 12 Expected Result of the Cross-Cultural Management Implementation in the Corporate Strategy (Depending on the Size of a Company)

After LS regression, a significant relationship can be noted between the effectiveness of cross-cultural management and the factor for international cooperation and the economic success of the company. The higher level of intercultural competence, enhanced by creative potential and creative approach to problem solving, improved by processing of international issues and advanced corporate culture, contributes to increasing the competitiveness of the company operating in global markets.

7. Summary

Despite the general need to make up for the delay, German business environments with their practice of excellent managerial cultural diversity and production success can be considered to be among the pioneers. In cooperation with representatives of these companies and with representatives of international companies, the predecessor of the project was “Corporate Culture in World Interaction”, initiated by the Bertelsmann Foundation, where additional evidence was collected to confirm the economic profitability of cross-cultural management, in order to once again emphasize the importance and need of cross-cultural management for the companies planning their activities in global markets.

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