4. Empirical findings from VA TECH

4.1 Company description: VA TECH

VA TECH has been a focused Technology and Service Company headquartered in Austria, Vienna. The company has offered products and services in the following four divisions: metallurgy, power generation, power transmission and distribution and infrastructure. It has employed 16,562 people worldwide in more than 50 countries worldwide (VA TECH, 2007a). VA TECH has pursued a global strategy.

In 1900 Gesellschaft für elektrische Industrie, or ELIN, was founded in Vienna. The company changed its name to ELIN Aktiengesellschaft für elektrische Industrie as it became a limited liability in 1921. 25 years later it was nationalized by government of newly formed Austrian Republic. In 1959 ELIN was merged with another government-owned company, AEG Union, to form Elin Union AG. It became part of government-owned Österreichische Industrieholding AG (OIAG) in 1970 and it was split into Elin Energieversorgung and Elin Energieanwendung, the latter of which took over services and electromechanical infrastructure operations. In 1993 Elin Energieanwendung was placed under newly created VA Technologie formed by OIAG. One year later VA Technologie was privatized and became a publicly listed company. Later its name was changed to VA TECH (Source: VA TECH, 2007a). Table 4 provides a ten year summary of VA TECH’s financial performance from 1995 to 2004.

| Ten year summary of VA TECH’s financial performance from 1995 to 2004 | In million euros |
|---|---|---|---|---|---|---|---|---|---|
| Years | 1995 | 1997 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 |
| Sales | 1,896 | 2,792 | 3,447 | 3,985 | 3,999 | 3,872 | 3,923 | 4,073 |
| Operating profit (EBIT) | ----- | ----- | 130 | 93 | 83 | 83 | 101 | -44 |
| Profit/loss | 97 | 110 | -95 | 30 | 32 | -93 | -15 | -68 |
| Number of employees | 15,46 | 17,92 | 21,71 | 21,34 | 18,85 | 17,73 | 17,48 | 16,56 |

Table 4: Ten year summary of VA TECH’s financial performance from 1995 to 2004 (Source: VA TECH, 2007b)
In 2005 the division metallurgy, power transmission and distribution and infrastructure were overtaken by Siemens. VA TECH Hydro has been the power generation division. It has been a global supplier of electromechanical equipment and services for hydropower plants and one of the world’s largest players in the hydropower generation market. This division has been acquired by Andritz. Interviews have been conducted at VA TECH Hydro and VA TECH Transmission and Distribution.

4.2 Major empirical findings from VA TECH

Data analysis of forty-two interview transcripts and interpretation are based on the findings of the literature analysis and interview transcripts. On 565 pages of interview transcript we could identify 205 codes. In the text we quote typical arguments and refer to relevant codes of each category.

In table 5 we show seven categories of influence on MNT performance at VA TECH. It also includes the number of quotations for each code and the percentage of interviews per most frequently coded variables. This enables the researcher to indicate the perceived salience of matters and to preserve the advantages of quantitative content analysis for a more qualitative text interpretation. The most frequently mentioned categories are team norms (mentioned by 92% of interview partners), followed by industry turbulence and team member characteristics (mentioned by 83% of interview partners), team leader characteristics and the impact of corporate structure on team performance (mentioned by 75% of interview partners). We could also obtain 68 quotations by 58% of interview partners that refer to cultural differences between team members from different countries.

<table>
<thead>
<tr>
<th>Category</th>
<th>Codes</th>
<th>Number of quotations</th>
<th>Percentage of interviews (100% = 12 interviews)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cultural differences between team members</td>
<td>Reference to cultural differences between team members from different countries:</td>
<td>68</td>
<td>58 %</td>
</tr>
<tr>
<td></td>
<td>Austria and Central Eastern Europe</td>
<td>9</td>
<td>25%</td>
</tr>
<tr>
<td></td>
<td>Austria and Italy</td>
<td>10</td>
<td>17%</td>
</tr>
<tr>
<td></td>
<td>Austria and U.K.</td>
<td>6</td>
<td>17%</td>
</tr>
<tr>
<td></td>
<td>Austria and Malaysia</td>
<td>4</td>
<td>17%</td>
</tr>
<tr>
<td>Country Pairs</td>
<td>Frequency</td>
<td>Percentage</td>
<td></td>
</tr>
<tr>
<td>---------------------------------------</td>
<td>-----------</td>
<td>------------</td>
<td></td>
</tr>
<tr>
<td>Austria and Germany</td>
<td>7</td>
<td>8%</td>
<td></td>
</tr>
<tr>
<td>Austria and Indonesia</td>
<td>6</td>
<td>8%</td>
<td></td>
</tr>
<tr>
<td>Austria and Bosnia</td>
<td>5</td>
<td>8%</td>
<td></td>
</tr>
<tr>
<td>Austria and Holland</td>
<td>4</td>
<td>8%</td>
<td></td>
</tr>
<tr>
<td>Austria and France</td>
<td>3</td>
<td>8%</td>
<td></td>
</tr>
<tr>
<td>Austria and China</td>
<td>1</td>
<td>8%</td>
<td></td>
</tr>
<tr>
<td>Austria and South Africa</td>
<td>3</td>
<td>8%</td>
<td></td>
</tr>
<tr>
<td>South-Africa and U.K.</td>
<td>3</td>
<td>8%</td>
<td></td>
</tr>
<tr>
<td>Slovakia and Russia</td>
<td>2</td>
<td>8%</td>
<td></td>
</tr>
<tr>
<td>Austria and Ireland</td>
<td>1</td>
<td>8%</td>
<td></td>
</tr>
<tr>
<td>Austria and USA</td>
<td>1</td>
<td>8%</td>
<td></td>
</tr>
<tr>
<td>Austria and Slovakia</td>
<td>1</td>
<td>8%</td>
<td></td>
</tr>
<tr>
<td>Slovakia and U.K.</td>
<td>1</td>
<td>8%</td>
<td></td>
</tr>
<tr>
<td>Slovakia and France</td>
<td>1</td>
<td>8%</td>
<td></td>
</tr>
<tr>
<td>Industry context: high-tech industry</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Industry turbulence</td>
<td>14</td>
<td>83%</td>
<td></td>
</tr>
<tr>
<td>Organisational Context</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Organisational culture</td>
<td>33</td>
<td>75%</td>
<td></td>
</tr>
<tr>
<td>Organisational culture</td>
<td>12</td>
<td>33%</td>
<td></td>
</tr>
<tr>
<td>Organisational strategy</td>
<td>10</td>
<td>25%</td>
<td></td>
</tr>
<tr>
<td>Team task</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Independent tasks</td>
<td>11</td>
<td>66%</td>
<td></td>
</tr>
<tr>
<td>Interdependent tasks</td>
<td>4</td>
<td>33%</td>
<td></td>
</tr>
<tr>
<td>Team norms</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Norms</td>
<td>49</td>
<td>92%</td>
<td></td>
</tr>
<tr>
<td>Team leader</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Team leader functions</td>
<td>87</td>
<td>75%</td>
<td></td>
</tr>
<tr>
<td>delegation of tasks</td>
<td>13</td>
<td>50%</td>
<td></td>
</tr>
<tr>
<td>Coordination</td>
<td>12</td>
<td>42%</td>
<td></td>
</tr>
<tr>
<td>importance of knowledge of foreign language for effective</td>
<td>6</td>
<td>42%</td>
<td></td>
</tr>
</tbody>
</table>
Table 5: Categories and codes derived from the analysis of interviews conducted at VA TECH (Source: Author)

<table>
<thead>
<tr>
<th>Communication with subsidiaries</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication with team members</td>
<td>10</td>
</tr>
<tr>
<td>selection of team members</td>
<td>9</td>
</tr>
<tr>
<td>Providing leadership</td>
<td>7</td>
</tr>
<tr>
<td>conflict management</td>
<td>5</td>
</tr>
<tr>
<td>decision making</td>
<td>4</td>
</tr>
<tr>
<td>goal setting</td>
<td>4</td>
</tr>
<tr>
<td>Monitoring</td>
<td>7</td>
</tr>
<tr>
<td>motivation</td>
<td>7</td>
</tr>
<tr>
<td>creation of collective team identification</td>
<td>3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Team member</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Team member: characteristics, competences and functions</td>
<td>56</td>
</tr>
<tr>
<td>Work experience</td>
<td>15</td>
</tr>
<tr>
<td>social competence</td>
<td>12</td>
</tr>
<tr>
<td>Personality</td>
<td>7</td>
</tr>
<tr>
<td>Open-mindedness</td>
<td>7</td>
</tr>
<tr>
<td>Coordination function</td>
<td>5</td>
</tr>
<tr>
<td>national background</td>
<td>4</td>
</tr>
<tr>
<td>Adaptability and flexibility</td>
<td>4</td>
</tr>
<tr>
<td>Freelancer</td>
<td>2</td>
</tr>
</tbody>
</table>

For the presentation of the categories we start with contextual influences on MNT performance (industry and organization). Next, we will provide information about team size, team composition and structure at VA TECH and stress the importance of task interdependence and identified MNT norms and values. We will conclude this part of the empirical analysis with a presentation of the role of MNT leaders and members. Table 6 presents a short summary of major empirical findings from VA TECH.
## Major empirical findings

<table>
<thead>
<tr>
<th>Industry</th>
<th>Unexpected fluctuations in order-intake, which are caused by industry turbulence, result in uncertainty and stress. They have an impact on MNTs since teams react to them in order to adjust their strategies.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organisational culture</td>
<td>VA TECH does not have a strong task/achievement culture since the company has been highly decentralized and has undergone several mergers. However, the corporate culture is strong enough to create an environment that stimulates MNTs to perform and contribute to the reduction of complexity inherent in multinational companies.</td>
</tr>
<tr>
<td>Organisational structure</td>
<td>The strength and performance of HRM has a positive impact on MNT performance in companies with a matrix structure, where human resource managers are responsible for delegating the right people to projects where their skills and abilities are immediately needed. Yet the withdrawal of team members due to the need to apply specialised expertise to other projects may harm MNT performance.</td>
</tr>
<tr>
<td>Organisational strategy</td>
<td>Despite the fact that the company focuses on cost savings and pursues a global strategy, diversity in MNTs is very beneficial. Important knowledge about different markets, customers, distribution partners, local competitors etc. is shared within the team and then applied in order to successfully enter new markets.</td>
</tr>
<tr>
<td>Team task</td>
<td>Task interdependence increases the need for cooperation between MNT members and facilitates the exploration and exploitation of tacit knowledge.</td>
</tr>
<tr>
<td>MNT composition</td>
<td>MNTs at VA TECH consist of three or more individuals who interact directly or indirectly for the accomplishment of a common goal and who come from two or more different cultural or national backgrounds. The category “norms and values of behaviour of team members” consists of 68 quotations and has been reported by 58% of interview partners. Several cultural standards have been identified indicating that team leaders and team members should be aware of different kinds of perceiving, thinking, judging, and acting that regulate behaviour of people from other societies. They should use this knowledge for preliminary business planning. Especially in the initial stage of team building, this knowledge can be helpful for understanding differences, avoiding stereotyping and creating cohesion and solidarity in the team. In addition, learning acculturation has</td>
</tr>
</tbody>
</table>
a strong moderating effect on team members. Mutual interactions of team members over a certain period of time have a strong impact on their identities, societal values and norms of behaviour, creating hybrid cultures. Fraction into three or more subgroups facilitates the creation of a positive motivational climate in MNTs through greater information sharing about personal traits, backgrounds, and interests, while in MNTs consisting of two major partners demographic diversity creates faultlines, since demographic characteristics divide the network into two subgroups.

| MNT norms | The impact of a norm on effectiveness has been shown to depend both on its content and its context. The context of the corporate culture is not so strong in the case of VA TECH. Team norms are more dependent on team context. |
| MNT leader | We could identify several competencies that are considered as important by MNT leaders and members. The most frequently mentioned competencies are setting and communicating common goals, coordinating, making the right decisions on time, delegating tasks and providing team leadership. Moreover, successful team leaders turn out to be socially and cross-culturally competent, multilingual and to have project-management skills, long working experience and the knowledge required to manage the challenging tasks. |
| MNT member | To demonstrate open-mindedness, to have the ability to adjust well to new situations, tasks and requirements and to show cross-cultural competence are the characteristics of team members of successful teams. |

Table 6: Major empirical findings from VA TECH (Source: Author)

4.3 High-tech industry

Unexpected fluctuations in order-intake, which are caused by industry turbulence (e.g., high competition, high corruption rates in foreign markets, different legal systems and legal requirements in different countries, cartel formation in the industry etc.), result in uncertainty and stress. They have an impact on MNTs since teams react to them in order to adjust their strategies. The company under study operates in the high-tech industry that is characterised by intense competition and constant need for innovation and speed. Project teams have been part of the organizational landscape in the high-tech industry for quite a while. Their capacity to do multiple activities simultaneously, rather than sequentially, saves
time and consequently, companies are expanding their use of project teams as a response to time-based competition (Stalk and Hout, 1990).

Multinational project teams are time limited. When a project is completed, the members either return to their functional units or move on to the next project. Members are drawn from different disciplines and functional units, so that specialized expertise can be applied to the project at hand. In some cases, they even involve external alliance partners, since they may lack the resources, know-how and time necessary to complete the project without external support. The following quotations from team members illustrate how stress, unexpected external factors and industry situation influence multinational project teams’ performance:

“However, these people will then quickly be replaced. After all, there’s a lot of money involved in our projects. The order value is 200m to 300m euros. And nobody wants to know whether it can be done or not. It has to. A new team member is appointed who has to show performance fast, or else...There is an immense pressure to deliver (P23: VA TECH 22; 156:156).“

“Well, more likely someone gives the wrong answer, wrong answer, well for him the right answer and for the rest the wrong answer, because of overload or stress or something, and then he calms down again and you can talk about it again. But there’s no special event, it just happens, happens periodically, where each of us goes “I don’t want anymore, I can’t go on“ or something like that (P24: VA TECH 11; 93:93).“

“The project I mentioned in Zambia, it was such an intensive project, it was such a short timeframe, and there was so much stress involved that many people lost the view where they were headed (P21: VA TECH 32; 119:119).”

“Well. When some people were under pressure, they accused others. But that’s normal. That’s not a problem. When people are under pressure, they react differently than when they’re not. People, who normally get along, suddenly don’t get along. This can lead to short-term quarrelling. But in this team there’s a good atmosphere. Probably because everything works according to plan and nothing goes wrong. In many other projects many things go wrong and then people start blaming each other. This immediately poisons the atmosphere. We are lucky in that everything works, everything according to plan. Deliveries arrive. We are just lucky everything works fine (P23: VA TECH 11; 96:96). “

In our opinion, MNT information that should be relayed should also include the type of company and the local and global situation in the industry at the time when the research study was conducted. This information is essential for the development of an understanding of the results obtained by providing a context
for them. Companies in different industries will implement different kinds of MNTs (e.g., multinational task forces, multinational project teams, multinational marketing teams etc.) and team composition, team members’ requirements, team tasks and team climate will depend on the industry and the situation at the time when the study was conducted. According to Jelinek and Wilson (2005), researchers studying MNTs have tended to focus on factors at the organizational or group level of analysis. However, MNT researchers cannot afford to continue to ignore factors beyond the organizational level of analysis, if they want to explain and predict the behaviour of MNTs and their members (Jelinek and Wilson, 2005).

4.4 Organisational context: VA TECH

4.4.1 Organisational culture of VA TECH

According to Harrison (1972, 1987, 1990), there are four different types of organisational culture. These are power culture, role cultures, task/achievement cultures and person/support cultures. The data shows that VA TECH has a task/achievement culture. In such corporate cultures it is more important to know what has to be achieved and not to focus too much on how to achieve particular goals. Consequently, skills and abilities of individual employees are more important than their individual position in the company or the acceptance of rigidly defined rules and norms of behaviour. Hofstede et al. (1990) who measured organisational culture on six different dimensions would characterise this type of corporate culture as “results-oriented”. Task/achievement cultures are characterised by a high degree of flexibility and individual responsibility. This creates a motivational climate that encourages creativity and gives employees more freedom to make their own decisions. In difficult situations, task/achievement cultures turn into role cultures since they lack a formal authority. VA TECH is more employee-oriented. The company shows more concern for people than for getting the job done. Team members identify more with their type of job than the organization. The communication climate is very open.

Employees from VA TECH have described the company’s corporate culture as follows (It should be mentioned that these interviews were conducted in July 2005. This same year VA TECH was taken over by Siemens.):

“Well, here with this business-oriented thinking, this typical entrepreneurship people keep talking about, here you are not subject to so many rules and structures, you have a lot of freedom, you can think outside the box, make
decisions beyond the core business, which is not that easy to do at Siemens I think (P18: VA TECH 35; 170:170)."

"I.e. many of these lateral thinkers sometimes, how shall I put it, these free spirits that are difficult to control, but which were a great asset to our company, you will find few of these, or significantly fewer than here, at Siemens (P18: VA TECH 37; 178:178)."

VA TECH does not have a strong, culture. The company has been highly decentralized and has undergone several mergers before the takeover by Siemens last year. This can be seen from the following quotation:

"We have this common spirit that has only developed now during the takeover, when defending ourselves that is, which has forged us together. We now have a VA TECH awareness that didn’t exist to this extent at all 18 months ago and this is really my answer, we have something, yes that depends on the situation, that wasn’t created by VA TECH internally, without this I would say we have no uniform culture, no common vision, no common mission, we have written this down, we have, we are also getting better at this, I fully admit this, but we are far away from having something like this because we are living it (P18: VA TECH 112; 479:479)."

The organization supports team work. This type of corporate culture contributes to team success, since teams have enough freedom to develop their own cultures and they act in accordance with newly developed rules and norms of behaviour. They are responsible for doing the planning, decision making, and implementation of the work. This way they can more easily adopt and enhance their ability to meet the needs of changing external circumstances. Teams form their own cultures and they perform more effectively with their own types of culture.

This dissertation is part of a comprehensive empirical study on MNTs in business organisations in a cross-cultural context which has been conducted in fourteen different companies (e.g., Siemens, IBM, VA TECH, Henkel, K&M International, Pöyry, OMV, Bombardier etc.) with different types of corporate culture. Due to the limited scope of the dissertation it is not possible and also not required to present all these findings. Yet we would like to mention that companies with task/achievement cultures are more successful in creating an environment and a motivational climate where MNTs perform successfully and contribute to the reduction of the complexity inherent in the organisation. This is not the case for companies with a role culture characterised by logic, rationality and highest effectiveness. This type of culture turns out to be detrimental for the implementation of MNTs.
4.4.2 Organisational structure of VA TECH

Matrix structure and the role of Human Resource Management (HRM)

The project teams at VA TECH are embedded in a matrix structure. The findings indicate that an effective matrix structure is one of the organisational conditions under which such teamwork flourishes in multinational companies. An organisation must be able to quickly mobilize employees with diverse capabilities into well functioning teams to respond to new challenges and contribute to a company’s success. Project teams are time limited and they come from different disciplines and organisational units. They save time by doing multiple activities simultaneously. HRM is one important component that can help an organisation with a matrix structure to improve team effectiveness by delegating the right employees to projects were their skills are immediately needed and by developing their skills, knowledge and motivation. Central here is the resource based perspective (Barney, 1991). According to Barney (1991), a firm’s human resources are believed to have implications for firm performance and provide a unique source of competitive advantage that is difficult to replicate. The results show that the effectiveness of the HRM system could have contributed to multinational project team success at VA TECH, but this has not been the case. The HRD has not been aware of the qualifications of its employees and consequently people with wrong qualifications have been delegated to projects were members with different skills have been needed. This is probably one of the biggest weaknesses of VA TECH. Due to the downsizing strategy qualified people have usually been fired. Consequently, there has been a lack of qualified team members for the different tasks that have to be fulfilled in project teams. In 1999 the company had 21,711 employees, while in 2004 this number decreased to 16,562 (see Table 4). The following quotations describe how important it is to have the right people with right qualifications on the right positions in a matrix structure in order to be effective. Due to the lack of people with required skills and the inability of the HRD to delegate the right employees to right position VA TECH has been facing many difficulties:

“Well, I’ve had to deal with structures and organisation systems so much. I don’t even know where I am right now or where I should start with my answer. I’ve thought about this so much, for years, about vertical, horizontal, business units, divisional, structures, matrix structures, basically I would say each structure works if the players within the structure are good, that is, good in this case also means they fit the requirements of the structure, of this particular structure. Well I think, to discuss this rather superficially, the question whether a matrix structure works for me is totally irrelevant, as long as I can make sure that the players in the matrix, particularly at the interfaces of course, that’s the main
issue to make sure these are capable to function properly, i.e. to find solutions and work with the others and handle conflicts, then every matrix works fine for me. And no matter how well-structured they are, what the guidelines for decision-making are, if there are people in the matrix, and the crucial interfaces, who cannot handle this, they will fail, in this case you can have hundreds of pages of process descriptions and rules, you need someone to live and communicate this all (P18: VA TECH 104; 419:419).“

“Well, regarding these structures, I’m still convinced there is no way you can work without a real matrix because we simply are too multidimensional. ....The main point for me is simply to have the right people at the really critical interfacing positions, and then everything works. Well, really, I am a great advocate of the statement that with the right people you can achieve anything (P18: VA TECH 105; 425:25). “

Past research has ignored the link between HRM practices, team effectiveness and firm performance. The following statement by the general secretary of VA TECH indicates one big weakness of the company under study. This is again the inability of the HRM to delegate the right people to the projects were their skills are immediately needed:

“And this is exactly why in so many companies I’m missing the appreciation or also maybe the importance of HR, which in my opinion is a blatant show of incompetence..... Naturally every head of personnel will tell you, well I cannot know what personnel requirements the divisional head exactly has. Returned the answer to you straight away, well for heaven’s sake, you will have to talk to him, that’s part of your task. And then, as the person responsible for personnel you and no-one else simply have to create the right environment to first, determine what requirements there are in our company, generally, regarding people, human resources. ...... what type of training systems do we need, which incentive systems do we need, how do we get that into our company structure and company culture? .... Again and again I’m totally frustrated when I see companies really tumble on their way to success and totally neglect the most important thing they need, and that’s the human resources, by leaving that to some HR manager who doesn’t do his job properly ... And this leads us to managing projects, understanding project objectives, establishing requirements, defining the path towards achieving objectives and then distribute the respective tasks and modules. If an HR project leader did this here, I think we would be massively successful (P18: VA TECH 106; 425:425). “

“And again we’re talking about HR. And this is not top management or divisional management; it could be managing a team of 5 to 8, maybe up to 10 people. If this team leader has been the wrong person for the job in the first
place, and there are maybe three or four difficult people in the team, you can forget the team’s performance, this will cost money, this reduces performance, here the offers will be made, there the projects will be managed and all that in such an environment, terrible (P18: VA TECH 109; 458:458).“

Research on MNTs has ignored to measure or evaluate the impact of HRM systems on MNT climate and performance. Future research should consider its role more explicitly and explore the interplay between HRM and project teams in a matrix structure. The performance of HRM will have a positive impact on MNT performance in companies with a matrix structure where human resource managers are responsible for delegating the right people to projects where their skills and abilities are immediately needed.

The withdrawal of team members and collective team identification

The rules for how team members relate to one another and interact socially are important in creating a healthy social environment within a team. Given team members’ diversity of values and assumptions about appropriate interaction, developing clear rules can be highly complex and time consuming in MNTs. Members from different cultures will have their own values and norms of behaviour. Through intense interaction with other employees they may change their perspectives and adopt new working styles. Yet this process takes time. But what happens if team members are repeatedly being withdrawn from the team? Withdrawal has turned out to be a key concern in MNTs, since the disruption caused by withdrawal of team members can harm team functioning and the motivational climate within a team. This positive motivational climate can be achieved if team members have considerable time to develop a sense of identification with the team and identify with their group members. Such teams are also more likely to behave in a cooperative way showing the willingness to share information and ideas in order to meet team goals (Gerben et al., 2005). It is important to have one core team consisting of employees who are involved in pursuing team goals from the beginning of the project until its end. Otherwise, it is impossible to develop a sense of identification in a team as reported by several team members:

“And this is mainly about information exchange, to establish a team and when people are on the 1st, 2nd, 3rd, 4th floors, they won’t be a team and they won’t feel part of a whole. Well, this really is a central topic cropping up again and again, no matter whether you work in a national or international context. It is important to have a location, a core team everything else centres around. Whether person number 45 is an ardent supporter of this idea and totally loyal, that’s a different matter. But the core has to be there. And if the core’s fine, the whole team spirit is fine. This can be supported by simple logistical things, like sitting next to each other (P27: VA TECH 20; 34:34).“
"As I said, that’s not always the same people. On average, that’s twenty to thirty people that always change. Especially the technicians are here first and then the work in the head office decreases. Some shifts to the construction site.... People come and go all the time. It’s not like there’s a group that’s emerging that sees itself as a homogenous group. The whole team gets mixed up all the time, construction site and here, so that they see themselves as one big project team rather than have their own group identity (P20: VA TECH 20; 95:95)."

"You have to be careful. These group-specific phenomena that appear when you have a group of twenty people together. Naturally we haven’t got that here, but a team that’s constantly changing (P20: VA TECH 21; 105:105)."

Obviously, the matrix structure and the need to withdraw team members from a team at any time harm team functioning and team climate. The empirical findings show that learning to accept the standards shared by members of an MNT always presents a challenge for a new member. It takes time to learn new ways to interact and communicate in an MNT, to get familiar with new role expectations and the values about appropriate interaction in the team.

According to Gerben et al. (2005), managers need to consider the motivational climate that exists within the group and, more specifically, the extent to which members emotionally identify with their group in order to understand whether a given level of expertise diversity in a group will have positive or negative implications for group performance. Gerben et al. (2005) have found that under conditions of low collective team identification, the relationship between expertise diversity and performance is not significant, whereas under conditions of high collective team identification, the relationship between expertise diversity and performance is positive. The focus of this study is on diversity in task-related expertise rather than on diversity in cultural characteristics of team members. Our study shows that withdrawal is a key concern in MNTs because of high interdependence between team members and the need to develop trust and emotionally identify with the team. Withdrawing of competent members may harm team functioning and the creation of a collective team identification.

4.4.3 Organizational strategy of VA TECH

The context of an organization also includes its competitive strategy (Jackson et al., 2003). VA TECH has operated in the high-tech industry and has pursued a global strategy by offering standardised products to its customers. The diversity of its workforce has brought cultural sensitivity that is very important when the company enters new markets and tries to reach different market segments. The
demographic diversity has increased the available pool of perspectives, styles, knowledge, and insights that employees bring to bear on complex problems. Team members share and apply their knowledge. Individual team member’s knowledge of the local language and the culture of the markets where the company operates and builds its facilities help maintain communication richness and the effective information flow with customers and local suppliers. This can be seen from the following quotation by a team member:

“Well. I think... Austrians get along well with each other much faster than with other nationalities. In this particular team it was no problem for different nationalities to work together. It certainly had advantages. And people, for instance, who have English as their mother tongue understand all these terms of the contract much better. So they can formulate things much better if there are critical points to the contract. If, for instance, Italians from our team delivered the steam turbines they got along great with the Greeks, who placed the order. Somehow it seems to work better with them. They get along much faster. In this particular case it certainly has many advantages (P23: VA TECH 12; 106:106). “

Team members share, apply and create new knowledge. The knowledge exploitation and exploration are indispensable and they increase the company’s competitive advantage. Individuals acquire, process, and disseminate their knowledge about their home market, products, technologies, business processes etc. that is based on their personal experience of conducting business in the local market and the information from local customers, suppliers, competitors, and other sources. Through the intensity of interpersonal interaction based on mutual trust and respect, team members secure vital tacit knowledge about different niche markets. Knowledge exploitation takes place when existing knowledge is shared by team members in the team. On the other hand, knowledge exploration is triggered by the exhaustive discussions during meetings and leads to the creation of new knowledge and determination of new strategies. The intense interaction between individual team members and the motivational team climate support these knowledge sharing activities. This observation is consistent with the need for a positive interactive atmosphere not merely at the beginning of interactions but also throughout their duration (Holden, 2004) and with the central role of socialisation for knowledge creation and sharing (Nonaka and Takeuchi, 1995). By getting to know individual team members on a personal level, employees create trust and this facilitates the information exchange. Fifty percent of my respondents have stressed the importance of socialisation for team effectiveness:

“Very good! It was so good we even had breakfast together every day at the construction site and discussed the schedule for the day. In fact, added a real social component with the project manager. We sat together in his room, he had a nice big table. There were all these topics we had to do with, regarding the manage-
ment of the site, commissioning engineers, systems engineers. These 6 people sat together in the morning having coffee and they were going through what was to be done, where are the objectives, where is there room for improvement, which strategy should we select, new ideas were exchanged, new strategies were fixed (P26: VA TECH 19; 98:98). “

“And we live it with the good teams, by getting together after work and playing pool, or occasionally the English can excel at their national sports, then we invite them bowling and show them how to keep the ball rolling. This is where you make, which then make the differences insignificant, here you realize it is all the same and you exchange important information and think about new strategies how to work the market better ... (P25: VA TECH 39; 121:121). “

“There’s a large number of kick-offs, there are sub-kick-offs, whatever, and then there’s the official start, where the team members are to introduce themselves to each other, make clear who’s on the team, who is part of the team. Ideally this takes place somewhere else, not really within a company setting in some meeting room, but maybe even a day or two at a seminar hotel at a nice location, where there’s a chance to talk to people on a different level, not just project-related. ....You get to know each other and it’s an official start and things start off differently, psychologically even, than when someone just starts to work here or there. This already provides a structure of a team. Not unimportant in project-oriented companies (P27: VA TECH 25; 47:47). “

The teams at VA TECH have existed in harmony with the rest of the organization and their behaviour has been congruent with the strategic goals of the organization. The knowledge has been shared and created through intense interaction between individual team members with different cultural backgrounds. This knowledge has existed within the teams. The company has never made the effort to codify this knowledge and to enable employees from other divisions of the organisation to take advantage of it. This has remained probably one big weakness of VA TECH. Yet teams have benefited from the knowledge about different markets, customer attitudes and preferences, different negotiation styles etc. that has been shared within the group and then applied in order to successfully enter new markets and negotiate with customers from different countries.

Despite the fact that the company has focused on cost saving and has pursued a global strategy, diversity has turned out to be very beneficial. According to Richard’s findings (2000) the relationship between cultural diversity and a firm’s performance will be moderated by a business strategy. Consequently, higher cultural diversity is positively related to firm performance when the firm pursues a growth strategy and negatively related to firm performance when the firm pursues a downsizing strategy (see Table 4). The results of the study conducted by
Richard (2000) have shown that downsizing firms with high diversity have the lowest productivity gains. Yet this is not in accordance with our study. By facilitating knowledge exploitation and knowledge exploration multinational project teams increase company’s competitive advantage.

4.5 Team task and task interdependence

The type of task that has to be accomplished by team members has an impact on team processes. Interdependence, whether based in task inputs or in shared goals and rewards, increases the need for cooperation between team members and facilitates the exploration and exploitation of tacit knowledge. Members must interact in order to complete a task. The findings show that task interdependence results in more cooperative behaviour and information sharing and strengthens team cohesion that motivates team members to jointly discuss organizational policies and practices and to interpret the team’s experiences:

"As the systems cannot function independently from each other, there is a lot of interaction between these people. Those responsible for their own area also have to take the interfaces to the other systems into consideration. And this is why there's such an active information exchange between these people (P26: VA TECH 6; 68:68)."

"...... as a central contact point possibly provides support with some specific problems, where we get together in a Jour Fix and discuss this problem, farther reaching effects, that you say, for instance, this team member has already experienced this, so you have to put him together with the other team members currently having this problem and they look at it together. This results in this unified process (P27: VA TECH 10; 26:26)."

"We work with each other and not independently from one another. And this has indeed resulted in something positive, some team spirit. I think, when there is a party on finishing the project, they'll pat each others' backs, and the negative aspects will be seen as almost irrelevant and less important (P25: VA TECH 26; 103:103)."

A different picture may emerge when individual team members’ tasks are not interdependent.

"That's a good question. Well I'd say you've hit the point there. Well, I wouldn't dare say that I've succeeded in getting good cooperation there, it is more a well functioning working next to each other, in rare cases where some matters
concern more than one team also with each other, but not generally working with each other. Simply speaking, the tasks are clearly defined and so the tasks are handled in the individual groups (P18: VA TECH 19; 126:126).”

The literature supports the findings and says that task interdependence requires and results in more cooperative behaviour and information sharing than does individual-based work (Campion et al., 1993; Campion et al., 1996; Janz et al., 1997). Strong ties between members should therefore develop in interdependent work environments (Kozlowski and Klein, 2000). The results of a study on intrateam interdependence and team identification show that for team members working under congruent conditions of low task and low goal interdependence, little interaction is required. They pursue their personal interests with low potential for conflict (Saavedra et al., 1993). A different picture may emerge when individual team members work under conditions of high task interdependence and high goal interdependence. They have to work together and need each other to achieve common goals. Congruent task and goal interdependence create a positive climate in which dissimilar team members are stimulated to explore and exchange their different perspectives and opinions and to manifest creativity and innovative behaviour (Van Der Vegt et al., 2005).

4.6 Multinational team composition and functioning at VA TECH

4.6.1 Team size and composition at VA TECH

MNTs at VA TECH consist of individuals from different countries, functions and divisions of the corporation. Sometimes, they also involve external alliance partners. Specialized expertise can be applied to the project at hand. When a project is completed, the members either return to their functional units or move on to the next project. Their ability to draw the best expertise regardless of where it resides and the capability of the interaction medium to capture a large portion of team processes and products is probably their biggest advantage. Multinational project teams are semi-virtual networks. The core team has one location and there is not a high fluctuation within this team. Many different nationalities are involved in such projects as can be seen from the following quotation from a team member:

“The people coming from VA TECH, the original company, are definitely not all Austrians. There are Brits, Finns, Germans, from all sorts of countries, then especially in Northern Ireland there are people who know the market much better. They are mainly British or Irish. They are then involved in the project as team members. In Vienna it is 20 people working closely together. But that’s not
always the same. There are 20 to 30 people taking turns. Sometimes they’re here, sometimes in Ireland. They are sent abroad for a couple of months and then they return (P20: VA TECH 3; 32:32). “

Project teams have been part of the organizational landscape for quite a while. Their capacity to do multiple activities simultaneously, rather than sequentially, saves time. Consequently, companies are expanding their use of project teams as a response to time-based competition (Stalk and Hout, 1990). In order to better understand study results, we recommend that in future researchers should provide more detailed information concerning the functions represented on the team, the percentage of time that members are dedicated to the team, the degree of cultural heterogeneity and the geographic location of individual team members.

4.6.2 Different cultural standards of team members and their impact on MNT performance

Norms and values of behaviour of individual team members influence MNT performance. Team members from different countries bring different exogenous societal factors into the team. Different norms of communicating, making decisions or resolving conflicts sometimes result in lower levels of team performance and team member satisfaction. By asking the interview partners if they could remember any critical incidents that emerged through interaction with employees from different countries in the team, we could collect cultural standards that are based on the values in members’ national culture.

Austrian team members have reported that the different ways of Chinese, Indonesian and Malaysian colleagues to interpret their environment, think, feel and act create barriers that hamper smooth cooperation. Harmony in their relationship is very important and they hesitate to criticise other team members. Austrians have to adopt a new communication style and to learn new ways how to indirectly criticize Chinese, Indonesian and Malaysian employees in order to avoid critical incidents. This can be seen from the following quotations:

“Oh yes, it’s possible you’re ignored and if you criticised someone in a negative and specific manner and maybe did that impolitely, then it’s possible that you have to suffer the consequences for a long time. So offending people is a big issue, generally with the Chinese, and I think that comes from a Chinese context, to lose face. You should give others the chance, in the Asian region, even if they were talking rubbish, to keep face and to wrangle out of this situation, without them losing face. Lose face is, to get to feel this version and also to learn it in the Asian region (P27: VA TECH 31; 62:62). “
“Especially when criticising, with Indonesians, criticising people is a terrible issue. ... In Indonesia, I’d say generally in South East Asia you’ll very rarely find that. You have to wrap up any criticism in nice words, in such a way that if it can’t be avoided that someone is to blame, you have to look for someone, or if it can’t be helped, you have to invent someone to blame, someone seems to have made a terrible mistake, knowing it was the person you are talking to, but you mustn’t say so. You have to let him keep face and that has obviously been the greatest challenge for me in all I did in project organization, to keep together this teambuilding and also team management (P18: VA TECH 63; 258:258). “

“You’ll mainly see this in Malaysia. Well, in Malaysia you have all these different peoples and there’s the Chinese, the Indians and the Malays. And what they probably have in common is that nobody wants to admit when they’ve made a mistake. This goes as far as people giving you the wrong information rather than none at all. With clearly expressed criticisms, which are perceived as criticism, you won’t achieve anything anywhere in the Asian region. And if you make it personal, that’s the end. You need to develop the right feeling for this, how to handle people, how to put it, how he could do that a little bit better and it really depends on how you communicate this, how you present yourself and treat others, in other words it’s all about the interpersonal level (P27: VA TECH 44; 85:85). “

These findings are in accordance with the results obtained in a study conducted by Vallaster (2005), who reports results from three longitudinal studies carried out to understand the social interactive processes on multicultural groups observed in their organizational settings. The studies show how Chinese members tend to adopt an acceptance-based attitude that is characterised by only minor and careful questioning of issues and situations and why they tend to avoid any direct criticism. Shen-Wei Hwong (2001) identifies the desire and need for harmony and respect as important Chinese cultural standards. Our data supports these findings.

Critical incidents caused through interactions with Italian team members have also been reported. Through their synchronic perception of time and the tendency to do several things at once they are late with deliveries of important documents. Moreover, their negotiation style is very confusing and this creates additional challenges for Austrian team members:

"With the Italians, agreement rather leads to the talks coming to an end and then the real negotiating tactics start. In the beginning this was strange, to finish talks and then, when processing and finalising the documents, notes, plans to really start the discussions. Now, the dialogue took place on various levels and very differently than we had expected. ... We had thought that Central European project management would be similar, but that isn't really so.
We fell for that trap. We could have prepared for that ..... (P25: VA TECH 14; 55:55). “

“If you raise a topic to early, they won't listen to you at all in Italy. They'll only start the dialogue once it becomes terribly urgent. And then there's the question whether you trust the Italians' talent for improvisation. And we just didn't have the time anymore to put much trust in anything. We had to bear it. Yes, bearing it is probably the right word. Although some of the deadlines were actually met .... Therefore afterwards it's much less dramatic than during the phase where this gap appears, where we say: Now it's really about time and the Italians say: We'll start not before the day after tomorrow. This last minute speed-up, they're really cutting it close, much more than we do. They improvise more (P25: VA TECH 18; 76:76). “

“Something we can't do, this instant switching. The Italians also discuss things hotly, hot-blooded we say, but they switch back, once the discussion is over, and you're back to the starting phase. This is different where we are from, this always has an effect and that's the biggest difference .... (P25: VA TECH 28; 112:112). “

Valtingojar (2005), who has studied Italian cultural standards, call this negotiation style “Diskursive Kultur”. According to his findings, Austrians tend to be confused when they discuss important issues with business partners from Italy, since they are not used to speak extensively and simultaneously about multiple topics not previously mentioned in the agenda. They can not follow all the details of the discussion.

In MNTs, individual team members serve as entry points for the influences of societal factors. The findings show that different cultural standards of team members have a strong impact on MNT processes and its performance.

4.6.3 Learning processes within the team and the effect of time on cultural standards of MNT members

An MNT entails differences among members in language, interpersonal styles, and a host of other factors. Yet over time team members reconstruct their identities and adopt new perspectives, new sets of rules and norms of behaviour, expectations and perceptions. Time has a moderating effect on MNT members. Learning processes within the team help to overcome insufficiencies in the performance of individuals. These learning processes also change MNT members’ prior rules, procedures, norms of behaviour and communication. Team members’
cultural standards are subject to change over time due to an intense interaction with employees from different countries. They accept the practices of team members with different cultural backgrounds and different working and managerial styles as they are, and then they actively integrate them into their working culture. In this way they improve their performance through an on-going integration of different cultural values and norms of behaviour that they find useful and appropriate. After intense mutual interactions with Italian and English team members in a multinational project team, Austrians have reported how they adopt certain practices to fit Italian and English culture and improve the overall effectiveness of the team, as can be seen from the following three quotations from Austrian employees:

“What worked perfectly was that we benefited from the Italians’ experience, because we could copy that for our work. With these positive effects, they regained our respect, which had been pretty much lost .... In Austria this wouldn't have happened like this, in a non-multinational project we would have taken all sorts of other steps to avoid this. That hasn't happened there (P25: VA TECH 22; 89:90).”

“In general, in these international teams.... the main decision-makers are English or British and they were more or less pushing things and the people actually responsible for it, they naturally were rather the Austrians and that of course resulted in a clash. Because if the one side pushes and sees it as their responsibility ..... On the other hand, the Austrians, who come from their bureaucratic system, they have to follow their reporting standards, follow the internal structures, another pair of eyes should see more, that's what makes everything even more complex. And you're moving between these forces. I'd say there is a lot of potential of banging your heads. Basically there's always some form of alignment process. We get a little more flexible, depends on the area, in case of multi-million problem cases the whole thing's difficult and not so flexible, and with the smaller things, that aren't that important, we more readily make decisions. And then there's this alignment process, where the others see how the Austrians work and we see how the English work. And occasionally there will be nice synergy effects (P27: VA TECH 34; 55:55).”

“The way our colleagues reacted to us. But also the formalisms of the English. Well we had certain problems to adapt, both with the English-language project leaders, because we didn't meet their expectations regarding work procedures, from our point of view as I said a little bit too bureaucratic the way they acted. .... Later we adapted. Then people began to reflect, that is, to show the same behaviour with withheld information, or to go for the greater formalism by squeezing particular questions in particular forms and creating a bureaucracy,
which now after the event helps us with claim management, because everything is documented in writing, but back then it hampered the project's progress a little bit. We simply had expected to proceed faster and ended up with a fairly bureaucratic process (P25: VA TECH 7; 43:43)."

Through the free flow of information and new ideas and through intense mutual interactions team members adopt new sets of rules and actions and they change their working practices. This observation is in accordance with the results of a study conducted by Early and Mosakowski (2001). They have found that heterogeneity has a detrimental impact on team functioning in the beginning. Over time, the teams form new ways of interaction and communication and the impact of heterogeneity on team performance becomes curvilinear. The findings and the results of this study show that cultural values and norms are subject to change and team members may adopt new perspectives and working styles through constant interaction with employees with different cultural backgrounds. Consequently, their predominantly held cultural identities should not be seen in fixed and unchanged national terms. Temporal factors impact MNT members. The fact that longitudinal investigations are less pursued in practice leads to the pattern of mixed results for studies of international diversity. The predominately held cultural values of members from one society have an impact on team performance, since individuals can be regarded as carriers of societal factors into the team (Jelinek and Wilson, 2005). Yet through the interaction with individuals from other societies these values are affected and team members tend to co-create their culturally determined frames of reference. Prior studies that have used such measures as collectivism or individualism or have tried to assess the influence of the relative cultural distance between team members on team effectiveness have ignored the effect that over a certain period of time mutual and intense interaction of team members may have on their identities, societal values and norms of behaviour.

MNT members’ values and norms of behaviour are affected by what they find in the team, by the negotiated team culture and by the interactions in which they take part. Based on the data at hand we support Larkey’s (1996; in Vallaster, 2005) suggestion that before being able to work together efficiently, culturally diverse group members need to share their perceptions, definitions and frames of reference so that they can later predict how, and explain why, other members react in a certain way. Through learning processes in the team, the sharing and application of tacit knowledge and an intensive interaction with team members from different cultures individuals change their norms of behaviour and adopt new standards, values and working practices.
4.6.4 Degree of cultural diversity within MNTs and subgroup formation

By forming new ways of interaction and communication and bringing different perspectives and information to the team, MNT members increase team performance. This is the case in teams consisting of at least three different nationalities. Splitting into three or more subgroups facilitates the creation of a positive motivational climate in the team through greater information sharing about personality traits, backgrounds, and interests. The likelihood to succeed with the establishment of new norms increases with diversity among team members. These findings are in accordance with the assumption made by Fink et al. (2004) that the larger the team and the more culturally different the members in the team are, the more easily the cause and emergence of conflicts will be reduced. In teams consisting of two major partners, demographic diversity creates faultlines, since demographic characteristics divide the network into subgroups. This phenomenon has also been observed by Lau and Murnighan (1998) and Harrison et al. (1998; in Roberson and Colquitt, 2005). Team members at VA TECH have reported how teams run into problems because of strong subgroup identification:

“There are always some of these. No question. In particular at the construction site, where regional workers, who also live there, have adapted to the environment much better. In the region of Northern Ireland, and they know their way there. And people sent there from here for a year still have some kind of temporary residence and no family around them and for this reason they are guests, who meet like-minded people in this kind of field-trip atmosphere. But outside the family, not like locals do. Naturally there's a tendency to have separate groups amongst the locals and the international people, which is occasionally overcome. Of course, due to personal sympathies, but in certain crisis situations this can cause certain problems. This can be an issue relevant for everyone. (P20: VA TECH 12; 83:83). “

“Of course you get larger sub-groups that develop. That's all very fine. Not everyone will be included. I've encountered this only once that this was completely mixed. But then people got together every day. Such group dynamics are possible, but this is not quite the standard, as some of the people live there and the others are only guests. (P20: VA TECH 45; 157:157). “

In MNTs consisting of two major partners demographic diversity will create faultlines, since demographic characteristics will divide the network into two subgroups. These findings are in accordance with the literature.
4.7 Team norms and values

Project teams at VA TECH have the freedom to develop their divergent subcultures and define their own norms. These norms regulate group members’ behaviour and they vary within different contexts. Successful norms in R&D project teams value longer time frames, while norms in other multinational project teams value aggressiveness and shorter time frames. Consequently, we could identify different types of norms that increase team performance. They influence how team members interact and communicate with one another, make decisions, solve problems and give feedback. Team norms are one of the most influential forms of social control over team members’ actions. We expected the organisational culture to have a strong impact on the emergence of norms we see operating in multinational project teams. Yet this has not been the case. VA TECH is a company with a weak corporate culture and its teams have the freedom to develop divergent subcultures. They define their own norms and are not forced to pursue the norms set by the organisation. The team leaders have the strongest influence on team members and they define the norms that are agreed upon by team members and permit the teams to regulate members’ behaviour. They are responsible for setting the goals and delegating the tasks. Team leaders who manage to define the tasks together with team members, to decide on standards that are shared by all and stress the importance of shared goals can create a motivational climate that motivates all members to contribute to a team’s overall success. ‘Formulating common goals in the team’ is identified as a type of norm that increases team performance at VA TECH.

To have a unified sense of purpose is very important, since the project team at VA TECH work on complex tasks, have frequently changing membership, and work remotely from one another. Under such circumstances, creating shared goals is not a straightforward task. It is the main responsibility of the team leader. This finding is in accordance with the results of other studies. For instance, Early and Mosakowski (2000) have found that team members with a unified sense of purpose and direction are more effective than those with inconsistent and fractionated goals.

One type of norm that is crucial in ensuring team performance is a ‘cooperative norm’. Cooperative team norms reflect the degree of importance members place on shared objectives and mutual interests. The emphasis in teams pursuing this norm is on satisfying members’ needs and objectives and maintaining harmonious relations. Consequently, members are more willing to share their ideas and knowledge because their rewards are derived from meeting team goals. Team leaders stress the importance of cooperation norms and mutual trust:
"The biggest challenges ... Yes. The project started really in the tender phase. In
the tender phase we had to make an offer to the customer to supply this project,
prepare the specifications and the price as well. This was very challenging for me
because I have not done this before. The customer is an electricity utility like
Wienstrom. So, I did not have much experience in selling projects. So this was
very challenging. To execute the project is also very challenging. And sure, it is
also very challenging interfacing with all these cultures. At the end of the day it is
contract, it is programs, it is certification but behind all of this it is just cultures.
So, this is....... This will give you some background. This is the contact. And this
contract is based on law of contract. They wrote all of these things in such detail
with such specific clauses, if you have any damage, any failure you can claim. But
after they wrote all of this they realized that if you are too taught in contract
management than the project can fail as well. So the first clause here says.....that
the customer and the contractor, which is me, should act under the spirit of
mutual trust and cooperation. **Spirit of mutual trust and cooperation.** It is very
important despite you have a contract and you know exactly what you need to do
you still should have **the ability to act within the spirit of mutual trust and
cooperation.** So, I really found that between these two companies there was not
the spirit of trust and cooperation. Without trust and cooperation sharing of
ideas and information was perceived risky and turned to be detrimental to our
performance (P20: VA TECH 43; 145:145)."

This finding is in accordance with Chatman and Flynn’s (2001) theoretical con-
tribution to MNTs. Their results support a model in which cooperative norms
mediate the effects of demographic heterogeneity on work processes and out-
comes. It suggests that, in past investigations of teams, researchers have overem-
phasized the direct influence of demographic composition and failed to appreciate
the influence of norms. By pursuing cooperative norms team members stress the
importance of shared objectives, mutual interests, and commonalities (Chatman
and Flynn, 2001).

A collaborative and diplomatic approach influences how a group's members
perceive and interact with one another, approach decisions, and solve problems.
Project managers expect their employees to engage problems on a professional
level by, first of all, understanding the details that lead to the emergence of the
particular problem and then by implementing the right solutions how to solve the
problem. Pointing the finger at somebody is not tolerated, since this way people
just follow the team leader but they are not encouraged to share their ideas and
perspectives with the team. To the extent that a team member is treated fairly,
he/she feels satisfied belonging to it and remains attached and committed to it.
Moreover, following a diplomatic approach turns out to be crucial in culturally
heterogeneous teams:
“My approach is always a collaborative approach, more or less a democratic approach. I do not like to point a finger. I have not pointed the finger yet. You did that and you did this wrong. It is always to engage the problem on the professional level. Understand the details of the problem and then implement solutions. So, away from this blaming culture. The second thing is that.... This can be a flow as well. I prefer the democratic way or the diplomatic way. It is always a little bit better. On this level you need to be diplomatic because you are working with people from different cultures that also cause this kind of problems (P22: VA TECH 21; 112:112).”

“The first thing you have to do if you are exposed to a serious problem is to laugh about it and then solve it. And this is also not an Austrian way. How can you laugh if the delivery is too late? Don’t point with the finger! Have a diplomatic approach! Stay away from stamping with the fist on the table! You do not get a cooperative approach this way. You just get the people following you (P22: Varech 22; 112:112).”

Mutual trust, respect and tolerance were the most frequently mentioned values by team leaders and team members of different teams in the company:

“And this makes life so easy, to talk to people in their respective languages is easy, it also shows you respect them, I think it’s so easy, it’s not just skills and competence, it is simply also a matter of respect. This is, by the way, also an integral part of when I say keeping an open mind, this includes respect, no matter what’s in store for you (P18: VA TECH 75; 298:298).“

“Tolerance and acceptance for these people’s traits and habits (P27: VA TECH 47; 93:93). “

“To be able to trust people in your team is very important (P17: VA TECH 15; 54:54).”

Teams at VA TECH form their norms early. Teams have the freedom to define different norms and are not forced to pursue the norms set by the organisation. Consequently, numerous types of norms that increase team performance have been identified. The impact of a norm on effectiveness has shown to depend both on its content and its context. At VA TECH, the context of the corporate culture is not so strong. Team norms depend on the team context. Our findings show that in companies with a weak corporate culture, MNTs form divergent subcultures and define their own socially shared standards against which the appropriateness of behaviour is evaluated in the team.
4.8 Individual team members at VA TECH

4.8.1 Team leaders

Effective team leadership turns out to be one of the most important factors that enable the effective functioning of multinational project teams at VA TECH. We could identify several competencies that are considered as important by MNT leaders and members. In this chapter, we will present these MNT leader competences. We report findings that incorporate the perspectives of MNT leaders as well as members on MNT leadership together. Identifying and presenting dual perspectives is not the aim of this dissertation and consequently does not play an important role in this context. Constructive monitoring is one important team leader function. Project managers have to make sure that the team invests time at the beginning of a new project to scope out the key deadlines and responsibilities. This helps also team members to understand who is doing what in the team. Leaders are expected to facilitate MNTs’ shared goals by helping team members understand how their mission contributes to the overall business strategy. Consequently, they are responsible for setting and communicating common goals to team members. Communication is considered to be an important MNT leader competency. Project managers who are multilingual are able to bridge the gap between the foreign customer and the company by acting as boundary spanners. Without a leader who can help translate, virtual cooperation is sometimes impossible. Language turns out to be an even higher potential problem than functional or cultural differences in the team. The knowledge of different languages helps team leaders to maintain communication richness and the effective information flow. By knowing the local language of their customers, they can gain more trust and respect and are more likely to get the contract. In order to facilitate the sharing and application of knowledge in the team, successful project managers create norms that encourage team members to communicate among themselves frequently, openly creating a positive motivational climate. Under these circumstances team members identify with their team and they become emotionally attached to their membership in the team. Leaders who can foster a level of collective team identification within the team by increasing the contact among team members through informal events, regular meetings or outdoor activities and supporting and recognising the team are perceived as a good leader by their members. One strong area of agreement among MNT members regards the importance of motivating and inspiring as an MNT leader competency. Team members are coming from different countries, functions and divisions of the company. In a hierarchical set up they have a different boss. Consequently, the project manager doesn’t have priority but only consensus-based control over his employees. He has to keep the personal level, the commitment, the interest and the dedication of
each individual member very strong and to motivate them to spend more time working on his project. Coordination has also been identified as an important MNT leader task. Project managers spend most of their time coordinating the activities of their sub-teams and ensuring a constant information flow between the various parties. Under a high level of uncertainty, intense competition, stress and turbulence in the industry it is important to make quick decisions and give clear directions to team members. To make the right decisions on time and lead the team has been identified as an important function of the project manager. Developing relationships with a variety of people from different countries in MNTs can be a very challenging task. This ability to build relationships is essential in the modern age of team-based organizations. For a leader, it is necessary to be socially competent and to have the required interpersonal abilities. Moreover, he should be a competent cross cultural communicator in order to work effectively with people with different cultural backgrounds. This entails not only the knowledge of the language but also the knowledge of different cultures and different values and norms of behaviour. He should acknowledge differences in behavioural styles of people from different countries, demonstrate flexibility in resolving conflicts between team members and show patience in intercultural situations. Finally, he should have project-management skills, long working experience and the knowledge required to manage the challenging tasks. The functions and characteristics of a MNT leader are summarised and illustrated by quotations in table 7:

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<th>Team leaders’ functions and characteristics</th>
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<tr>
<td>Delegation of tasks</td>
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<td>“What worked really well was that people at some stage realised what the expectations were, what was expected of them. That was an adaptation process, the expectations were adapted to the player's skills, that also happened, the players in the process or team weren't just trained until they knew something, which we wanted, sometimes you have to accept, OK we have a very valuable employee who is excellent in negotiating with salespeople, but I would still handle the legal stuff in this contract with someone else. That's of course the mutual understanding of all team members regarding the respective A areas of responsibility, B skills and C areas of operation, and once you've found a match, where everyone is where he knows what to do best, then you have the option of turning around and just let the process go on. And I have to admit that at the end for me as a project leader, that was where I said that this worked best, simply putting the people where they belong (P18: VA TECH 69; 277:277).“</td>
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| Coordination | "The last thing is do not spend too much time on the details. Somebody has to have the big picture. If I had to do in detail I would have to drop the detail work whenever it is necessarily for somebody to have the big picture. Otherwise nobody knows what is going on. And the more projects I was involved in the most I have seen that the person with the big picture does the least work. O.k. produces the least amount of paper work. It looks like he is doing the least work. **But if this person is not going around and coordinating and talking to people and keeping them motivated than the coordination fails.** And that I think, keeping the big picture, keeping the people communicating with each other these are the most important things (P21: VA TECH 36; 134:134)." |
| Knowledge of foreign language for effective communication with subsidiaries | "No, it might be possible but really the knowledge of Russian is essential. Without **knowledge of Russian** it could be very difficult because there is a lot of call correspondence written in Russian only. Certain specifications are written in Russian so it takes some time so I can read it and I can respond very quickly (P19: VA TECH 4; 47:47)." |
| Ensuring communication within the team | "**Communication.** I know that I mentioned that before. To make sure that people don't only pass text or data but share information and work together. He has to make sure that the environment is fitting to support a real communication (P21: VA TECH 34; 134:134)." |
| Providing leadership | "Of course, I mean, a great lot of people are involved here, each with his own interests and tasks, and if they don't have these under control, and now I'm coming back to this, that is the rigid management, if you can't keep them under control, a lot can go wrong in such a project. This can lead to damage costing millions, there's no room for unrestrained democracy, that's not possible. And to return to your question now, if you move in an environment that is like that, because of national structures or cultures, or because of corporate cultures, so that you have a certain hierarchical or acceptance regarding hierarchies, then you will find it much easier to work in such an environment (P18: VA TECH 120; 503:503)." |
| Decision making | "Basically ... I, and that's simple, that's for instance the militarist approach, that's not very popular, but you need leadership somewhere and at the moment I do not let go of this leadership and so **decisions are made, although on a**
bilateral discussion basis information is gathered, but at some stage it's simply that I exert my power and say, OK, from the VA TECH point of view I now make a decision and inform everybody of this decision or guideline. Of course, once again, they have all been involved in the run-up to the decision, in the discussions and the information-gathering process, I do not make completely isolated decisions just by myself, I naturally try to consider all the inputs I got from the discussions, but you do get to a point where you say, democracy in a group that's been put together at short notice is an ideal, but not what's possible from an operational and feasible point of view at this moment, and so there has to be a certain, I don't want to call it dictatorial way of making decisions, but as we like to call it democratocracy. I simply have to make decisions, or they don't make it, we could discuss everything endlessly and then I just communicate my decisions into the individual groups, and I think at the end of the day the people accept that (P18: VA TECH 20; 132:132)."

"The diversification of the different types of people. This was probably the biggest individual challenge. That there are many different disciplines and everybody thinks that what he is doing is right and everybody wants to do a good job. But one person, when he does a good job and does every single step in the best engineering detail, this means that he is running into many individual hours of work, he is going into the direction that every single solution he needs for that.... And on the other side, I am responsible for cost. Many of these people do not understand the cost factor. And they do not understand when they do an excellent job for a project that the next time somebody else has to do it again. And the cost factor of personnel that runs up some of the costs and makes us less competitive. In order to continue being very successful on the market we have to look at this commercial factor as well. Many of these engineers do not have an understanding for ideas as liability, guarantee, costs, framework contracts, standards. So, my task is to monitor what they are doing (P21: VA TECH 3; 25:25)."

"Again it comes down how do you motivate these people to do the work. If they do not work for you most project managers in this house do not have priority but only consensus-based control over the people. You have to keep
this personal level very strong, to keep the commitment, to keep the interest, to keep the dedication...because you cannot tell them: "I am the boss and do what I say. When I say jump than jump." Because they do not work for you. In a hierarchical set up they have a different boss. So the expectations are based on what they have to do, and how close they work, and how much you can check ... an inserted corporate influence (P21: VA TECH 38; 140:140)."

Creation of collective team identification

"In this case, the groups exchange certain prejudices with each other. This normally does not go very deep. Real full integration in and identification with the team on the part of the team members doesn't necessarily just happen by itself. It can happen, but it takes the boss's assistance, so that there can be some interaction and that people spend some private time together, too (P20: VA TECH 15; 83:83)."

Project-management skills

"...well, that you help people with this inter basis, that is this basic knowledge about project processing, project management, project execution and then social competence and I think then you've achieved a major step, then later of course also the expertise, and I would even go as far, if a project leader is good enough in handling a project and with his social skills, to put together a project team that is easily managed and works together well, then he also has the ability to bring in his procedural experts and general experts at the right place, where they simply cover the knowledge which he has as a process leader but not as the owner of the process, no, wrong, not the owner, as the engineer of the process (P18: VA TECH 52; 229:229)."

Social competence

"And I'm back at what I said at the very beginning, I think, and again a lot comes from the topic of competence, from our rational mind, from our brain it goes down straight to our gut, our feeling, well I have a lot of feeling in my gut, that's why it's so big. That's not written anywhere, you don't learn that anywhere, you can fall terribly for people, if you do not realise, if you can't read their faces or if you can't look behind the mask, well, I'd say here social skills are at least as important as expert skills, I would even go as far as to say even a bit more important, because we had a lot of people with a lot of expert know-how, but failed totally in these tasks. And that includes people with more
Table 7: Team leader functions and characteristics at VA TECH (Source: Author)

These functions and characteristics of MNT leaders have been identified as necessary requirement by other researchers too. Yet we would like to point out that the current literature on leadership in teams in multinational settings is still in the early stages of development. Maznevski and DiStefano (2000) suggest that leaders need to be able to successfully map, bridge, and integrate the different perspectives of culturally dissimilar team members. However, empirical work, especially studies that are not based on student data, is still rare. One notable exception is a study by Cummings (in press) based on data gathered from 129 teams working across different units in a multinational company. Cummings concludes that leaders should create norms that encourage team members to communicate among themselves frequently and openly. The empirical study conducted by Joshi and Lazarova (2005) has identified four competencies that are considered as important by MNT leaders and members across multiple locations: communication, direction and goal setting, facilitating teamwork, and motivating and inspiring. Given the universal appeal of these competencies among the respondents, it has been proposed that these may be viewed as “core” competencies or minimum requirements of effective MNT leadership. The study has involved 89 MNT members and 50 MNT leaders from a Fortune 500 software and hardware company. According to Schweiger et al. (2003), many of the successful leaders are able to succeed because of their ability to manage the many complex team functioning issues and navigate the team context. Understanding skills needed on the team, having solid relationship with subsidiaries, being multilingual, having project management skills and a high need for achievement, demonstrating open-mindedness for learning and exhibiting humility are the personal capabilities and characteristics that help leaders to do so.

Researchers should continue identifying core competencies of effective MNT leadership. However, they should be aware that the type of team matters. By distinguishing among types of teams they may find out that the personal capabilities, skills and abilities of MNT leaders will vary for different types of teams.

4.8.2 Team members

Team members are individuals and they react to socialization attempts in MNTs in different ways. We could identify several personal characteristics and requirements that team members should have in order to contribute to effective team functioning. For a team member of an MNT it is important to be socially and...
culturally competent and to have the required interpersonal abilities. He/she should have the ability to deal with people from different cultures, to be trusting and cooperative:

"That's the main point. It takes place on all levels, in verbal and in general behaviour. Some people are better at this, handle people more diplomatically, in all sorts of contexts and some are not so good, but this also depends on the communication and the meaning, and whether you have the antennae for this and the sensitivity... Simply being sensitive regarding other nations and cultures ... (P27: VA TECH 48; 93:93). "

To demonstrate open-mindedness has also been identified as a critical ability for MNT members. There are many perspectives that are represented in such teams and team members should be able to appreciate the value of these different cultural views. They should be interested in learning from such perspectives. The ability to adjust well to new situations, tasks and requirements by showing openness for experience has been mentioned to be an important requirement. McCrae and Costa (1997) have identified five major personality factors. These are extroversion, agreeableness, conscientiousness, neuroticism, and openness to experience. The last factor ‘openness to experience’ is related to openness to new cultures. People with high levels of this are likely to be interested in learning and gaining professional knowledge. They adjust well to new tasks and requirements. These findings are in accordance with our data.

Cultural distance between team members has also an impact on MNT functioning. Yet members from very distinct cultures don’t necessarily have more difficulties finding the right ways of interaction and showing understanding for different cultural values and norms of behaviour as can be seen from the following quotation:

"With the Italians the difference was too small, that's why it affected us like a grain of sand in our shoe... If there's a big pebble in your shoe, you remove it, straight away. If you have a grain of sand there, you think, this will go away, and at the end your foot is completely sore. That's an anagram for, what is it like when .... (P18: VA TECH 41; 215:215). "

Having team members with extensive work experience is a benefit for the team. The experience helps individual members to understand the value that each party brings to the table and to face the challenges of melding these perspectives. Successful teams have the right mix of professionals:

"Well I'd say the success criteria are the professionalism of the player, the process does not allow for, it is too complex, how should I put it, too unique, you
cannot repeat it, we now have our in-house process and it must work (P18: VA TECH 42; 210:210)......And that brings me back to your question, the secret of success is simply the professionalism of the players... (P18: VA TECH 43; 210:210). “

Multinational project teams may also involve external alliance partners. In this case it is necessary to introduce coordination and control functions between these two parties. Coordinating the activities of the two parties creates additional challenges for individual team members.

As can be seen it is very challenging to decide on the right mix of people in the team. This will depend on the situation, the task that has to be accomplished, the time frame and the type of team. The results show that having team members who are socially and culturally competent, open-minded and able to adjust to new situations, tasks and requirements does contribute to team effectiveness. These findings are in accordance with the literature. For example, Matveev et al. (2001) have identified four dimensions of cross-cultural competence that represent a necessary requirement for MNT members. These are interpersonal skills, team effectiveness, cultural uncertainty, and cultural empathy. According to Gudykunst (1998; in Matveev et al., 2001), cross cultural communication competence of individuals affects multinational team performance. McCrae and Costa (1997) claim that individuals with high levels of openness to experience will tend to adjust well to new situations and different cultures.

4.9 Summary of empirical findings from VA TECH

This study has been conducted at VA TECH. Twelve problem-centred interviews have been conducted with team members and team leaders and considerable time has been given to writing up notes of observation. All conversations have been captured with recording equipment and the interviews have been taped and a transcript has been produced.

The findings indicate that unexpected fluctuations in order-intake, which are caused by industry turbulence (e.g., high competition, high corruption rates in foreign markets, different legal systems and legal requirements in different countries, cartel formation in the industry etc.), result in uncertainty and stress. They have an impact on MNTs since teams react to them in order to adjust their strategies.

Corporate culture has a strong impact on team effectiveness. VA TECH doesn’t have a strong task/achievement culture since the company has been highly decen-
tralized and has undergone several mergers. However, the corporate culture is strong enough to create an environment that stimulates MNTs to perform and contribute to the reduction of complexity inherent in multinational companies.

Past research has ignored the link between HRM practices, team effectiveness and firm performance. Future research should consider its role more explicitly and explore the interplay between HRM and project teams in a matrix structure. According to the empirical findings, the strength and performance of HRM will have a positive impact on MNT performance in companies with a matrix structure, where human resource managers are responsible for delegating the right people to projects where their skills and abilities are immediately needed.

According to Van der Vegt and Bunderson (2005), researchers need to consider the motivational climate that exists within the group and, more specifically, the extent to which members emotionally identify with their group in order to understand whether a given level of expertise diversity in a group will have positive or negative implications for group performance. However, the repeated withdrawal of team members from MNTs due to the need to apply specialized expertise to the next projects has a negative impact on the creation of collective team identification and may harm team performance.

Despite the fact that the company focuses on cost saving and pursues a global strategy, diversity turns out to be very beneficial. The teams at VA TECH have the freedom to develop their divergent subcultures. They exist in harmony with the rest of the organization and their behaviours are congruent with the strategic goals of the organization. The knowledge is shared and created through intense interaction between individual team members with different cultural backgrounds. This knowledge about different markets, customer attitudes and preferences exist within the teams. It is shared within the group and then applied in order to successfully enter new markets and negotiate with customers from different countries.

The type of task that has to be accomplished by team members has an impact on team processes. Interdependence, whether based in task inputs or in shared goals and rewards, increases the need for cooperation between team members and facilitates the exploration and exploitation of tacit knowledge. The findings show that task interdependence results in more cooperative behaviour and information sharing and strengthens team cohesion that motivates team members to jointly discuss organizational policies and practices and to interpret the team’s experiences.

MNTs at VA TECH consist of three or more individuals who interact directly or indirectly for the accomplishment of a common goal and who come from two or
more different cultural or national backgrounds. They come from different functions and divisions of the corporation. Sometimes, they also involve external alliance partners. Specialized expertise is applied to the project at hand. When a project is completed, the members either return to their functional units or move on to the next project. Team members from different countries bring different norms of communicating, making decisions or resolving conflicts to the team. By asking the interview partners if they could remember any critical incidents that emerged through interaction with employees from different countries in the team we could collect cultural standards that are based on the values in members’ national culture. Leaders and team members should be aware of different kinds of perceiving, thinking, judging, and acting that regulate behaviour of people from other societies. They should use this knowledge for preliminary business planning. Especially in the initial stage of team building this knowledge could be helpful for understanding differences, avoiding stereotyping and creating cohesion and solidarity in the team.

Time has a moderating effect on cultural standards of team members. For example, after intense mutual interactions with Italian and English team members in a multinational project team, Austrians have reported how they adopt certain practices to fit Italian or English culture and improve the overall effectiveness of the team. Through the interaction with individuals from other societies their values are affected and they co-create their culturally determined frames of reference. Prior studies that have used such measures as collectivism or individualism or tried to assess the influence of the relative cultural distance between team members on team effectiveness have ignored the effect that mutual and intense interaction of team members over a certain period of time may have on their identities, societal values and norms of behaviour.

Splitting into three or more subgroups facilitates the creation of a positive motivational climate in MNTs through greater information sharing about personality traits, backgrounds, and interests, while in MNTs consisting of two major partners demographic diversity creates faultlines, since demographic characteristics divide the network into two subgroups.

We could identify numerous types of norms that increase team performance. The impact of a norm on effectiveness is shown to depend both on its content and its context. At VA TECH, the context of the corporate culture is not so strong. Team norms are more dependent on team context.

Effective team leadership turns out to be one of the most important factors that enable the effective functioning of multinational project teams. We could identify several competencies that are considered as important by MNT leaders and members. These are constructive monitoring, setting and communicating common
goals, motivating and inspiring, coordinating, making the right decisions on time and leading the team. Moreover, successful team leaders turn out to be socially and cross-culturally competent, multilingual and to have project-management skills, long working experience and the knowledge required to manage the challenging tasks. To demonstrate open-mindedness, to have the ability to adjust well to new situations, tasks and requirements and to show social competence are the characteristics of team members of successful teams.