



UNIVERSITY OF GOTHENBURG
SCHOOL OF BUSINESS, ECONOMICS AND LAW

Cultural Diversity Management, Inclusion and its
Relationship to Innovation Performance in the German
Automotive Industry: A Comparative Case Study.

by

Christopher Meng

A Dissertation

Submitted to the Department of Business Administration

University of Gothenburg

Gothenburg School of Business, Economics and Law

For the Degree of Master of Science

International Business and Trade

May 26, 2022

Abstract

The aim of this thesis is to investigate the influence of inclusion on the relationship between cultural diversity and innovation performance in the context of unit orientation in the German automotive industry. A distinction is made between operational and innovative units. For this purpose, semi-structured interviews with ten employees from six German automotive companies were conducted in the context of a comparative case study. This form of qualitative research is particularly suitable for identifying subjective perceptions in terms of sensitive subjects. The current uncertainty and digital disruption in the automotive industry adds to the highly dynamic and competitive environment of MNCs. With increasing cross-cultural interactions, a culturally heterogeneous workforce represents a resource that enhances creativity and adaptability in the context of dynamic capabilities. This paper shows that innovative units are more culturally heterogeneous than operational units and consequently confirms the assumption that cultural diversity acts as an important driver for innovation. Furthermore, it is found that the development of cultural competences accelerates adaptation processes in heterogeneous environments and that some companies possess a higher cultural absorptive capacity due to global innovation activities, market-specific product requirements and a diversified product portfolio. Finally, it is found that inclusion positively influences peak innovation performance and that inclusion provides a greater impact for innovative and culturally heterogeneous units. Furthermore, this paper develops a conceptual model that complements current research regarding diversity and innovation management and is therefore equally relevant for international business research and socio-psychological research.

Table of Contents

List of Figures and Tables.....	5
List of Abbreviations	7
1. Introduction.....	9
1.1. Problematization and Scientific Relevance	9
1.2. Research Question.....	11
1.3. Structure and Method.....	11
2. Background	13
2.1. German Automotive Industry & Innovation	13
2.1.1. Key Trends in the Automotive Industry.....	13
2.1.2. German Automotive Industry	15
2.1.3. Global Innovation Initiatives.....	15
2.2. Cultural Diversity	18
3. Literature Review & Theoretical Framework	20
3.1. Culture	20
3.1.1. Hofstede's Cultural Framework	21
3.1.2. The GLOBE Framework	25
3.1.3. Critics on Hofstede and GLOBE.....	30
3.2. Diversity Management.....	32
3.2.1. Cognitive Diversity.....	32
3.2.2. Similarity-Attraction Paradigm.....	34
3.2.3. Social Cognitive Theory	35
3.2.4. Social Identity Theory	37
3.2.5. Resource-Based Theory.....	39
3.3. Inclusion.....	41
3.3.1. Cultural Intelligence.....	42
3.3.2. Dimensions of Inclusion	44
3.4. Innovation Management	48
3.4.1. Cluster & Innovation Systems	49

3.4.2. <i>Knowledge Management</i>	53
3.5. Theoretical Framework	57
4. Methodology and Data Collection	64
4.1. Methodology	64
4.2. Data Collection	65
4.2.1. <i>Data Sampling</i>	65
4.2.2. <i>Interview Process</i>	66
4.2.3. <i>Assessment of Research Quality</i>	67
4.2.4. <i>Potential Bias and Susceptibility to Errors</i>	68
4.3. Data Analysis	69
5. Results and Analysis	72
5.1. Data Introduction	72
5.2. Results	76
5.2.1. <i>Workplace & Unit Orientation</i>	76
5.2.2. <i>Cultural Diversity</i>	79
5.2.3. <i>Inclusion</i>	84
5.2.4. <i>Further Findings</i>	90
5.3. Analysis	92
5.3.1. <i>Conceptual Model</i>	99
6. Conclusion	108
6.1. Implications	109
6.2. Limitations & Future Research	110
References.....	112
Appendix	120
Declaration of Authorship	136

List of Figures and Tables

Figure 1. Scoring of Germany according to Hofstede's cultural dimensions (Based on: Hofstede Insights, 2022a).....	28
Figure 2. Cultural practices and values in the Germanic Europe group according to GLOBE (Based on: GLOBE Project, 2022a).....	29
Figure 3. The Triple Helix Model of University-Industry-Government Relations (Etzkowitz & Leydesdorff, 2000, p. 111).	51
Figure 4. A Model of ACAP (Zahra & George, 2002, p. 192)	56
Figure 5a. The interactive effect of acquisition and cognitive diversity (Nowak, 2020, p. 19)...	59
Figure 5b. The interactive effect of transformation and cohesiveness (Nowak, 2020, p. 20)..	59
Figure 6. Inverted U-shaped relationship between geographic diversity and innovation performance (Seo et al. 2020, p. 859)	63
Figure 7. Participant distribution in terms of unit diversity and unit orientation (own work) .	81
Figure 8. Participant distribution in terms of unit diversity and perceived inclusion (own work)	86
Figure 9. Participant distribution in terms of unit orientation and perceived inclusion (own work)	87
Figure 10. A Model of CACAP (own work, based on Zahra & George, 2002, p. 192).....	95
Figure 11a. Team performance of culturally homogeneous and heterogeneous units in the context of time (own work).....	100
Figure 11b. Team performance of culturally homogeneous and heterogeneous units in the context of time (own work).....	101
Figure 11c. Team performance of culturally homogeneous and heterogeneous units in the context of time (own work).....	102

Figure 11d. Team performance of culturally homogeneous and heterogeneous units in the context of time (own work).....	103
Figure 12a. Innovation performance in the context of cultural diversity and the impact of inclusion (own work)	104
Figure 12b. Innovation performance in the context of cultural diversity and the impact of inclusion (own work)	105
Figure 13a. Innovation performance in the context of CACAP (own work).....	106
Figure 13b. Innovation performance in the context of CACAP (own work).....	107
Table 1. Country clusters according to GLOBE (GLOBE Project, 2022).	27
Table 2. Eleven dimensions of inclusion (Based on: Lubiano, 2019).	45
Table 3. Participants in the study.....	70

List of Abbreviations

Absorptive capacity	ACAP
Artificial intelligence	AI
Audi innovation research	AIR
Cognitive diversity	CGD
Cultural absorptive capacity	CACAP
Cultural diversity	CD
Cultural intelligence	CQ
Global innovation system	GIN
Global leadership and organizational behavior effectiveness	GLOBE
Headquarter	HQ
Head of Racing	HoR
Human resource management	HRM
Information and communication technology	ICT
Innovation manager / Innovation management	IM
Knowledge management	KM
Mobility-as-a-service	MaaS
Multinational corporation	MNC
Non-Fungible Token	NFT
Original equipment manufacturer	OEM
Participative safety	PS
Potential absorptive capacity	PACAP

Procedural justice	PJ
Project manager / Project management	PM
Qualitative research	QR
Realized absorptive capacity	RACAP
Research and development	R&D
Resource-based theory	RBT
Similarity-attraction effect	SAE
Social cognitive theory	SGT
Social identity theory	SIT

1. Introduction

1.1. Problematization and Scientific Relevance

In their review of evolving research in the context of MNCs, Kostova et al. (2016) find that, in addition to research on subsidiary roles and their relationship to headquarters (HQ) and global human resource management (HRM), the subject of knowledge creation and knowledge transfer has been at the forefront of IB research since the 1990s. This reflects the demands of innovation and knowledge diffusion and at the same time the challenges of MNCs today. Increasing cross-border interactions between global actors and MNCs equally demand and promote the importance of knowledge transfer and integration. The tendency towards increasingly dispersed R&D centers and innovation labs primarily serves to provide access to resources and local knowledge in order to study regional trends and requirements from a very short distance and to adapt one's own products and services to these pressures (Czerny et al., 2011). Teece (2014) calls this form of organizational learning and adaptation to local needs dynamic capabilities. Especially in changing environments with constantly changing actors and external demands, dynamic capabilities are one of the crucial sources of competitive advantage for successful MNCs (ibid.).

More than any other, the automotive industry is currently facing great uncertainty (Kuhnert et al., 2018). New market entrants, highly varying and dynamic customer demands, and digital disruption challenge original equipment manufacturers (OEMs) and suppliers to identify key trends of the future and demonstrate great responsiveness in implementing them (Berret, 2022). As the largest automotive industry in the world, the German automotive industry is therefore an essential participant, but also a formative factor in shaping the mobility of tomorrow (Kuhnert et al., 2018; Riedle & Bernhart, 2021). This growing pressure to innovate new products and services calls for the identification of sources of knowledge creation and innovation that are both available and adaptable.

Due to highly global interactions, MNCs are constantly confronted with culturally heterogeneous environments. Culture can be understood as the collective programming of the mind, which differs within different groups (Hofstede, 1984). These differences of collective programming influence personal characteristics, core beliefs and behavioral patterns of

individuals. However, they are equally influenced by experiences and learnings, which makes culture adaptable and dynamic (Tung, 2008).

Furthermore, globalization is leading to cultural blending in countries that have been facing increasing social division for years. Although this is not in the context of profit driven companies, an overall societal confrontation with culture, as well as with demographic, sexual, and ethnic diversity, leads to a context in which each individual, but also MNCs, must inevitably confront the challenges and potential opportunities of cultural diversity. These growing intercultural commonalities through globalization and migration consequently provide a highly complex environment for MNCs, which will need to overcome such challenges of knowledge transfer and innovation in the context of differing views, approaches, and beliefs (Bandura, 2002; Teece, 2014). Equally, however, cultural diversity also provides opportunities to do things differently than in the past. New ideas, diversity of experience, and new forms of problem-solving can lead to significant increases in knowledge creation, especially in the innovation process (Hunt et al., 2020). Consequently, the context of MNCs, innovation performance and cultural diversity as a potential driver for innovation is highly interdependent and relevant for the success of MNCs in the German automotive industry.

However, there is only limited research on how variations in knowledge sourcing benefits and integration challenges depend on the respective unit orientation as well as organizational orientation of MNCs and in which combination and context cultural diversity can actually lead to a gain in benefits over costs (Seo et al., 2020). Due to changes in demographics of workforce and organizational structures, MNCs are increasingly dependent on cultural diversity, but it is necessary to know when and how to tackle cultural diversity, since establishing cultural awareness and high inclusive workplaces is associated with costs and investments that are not generally effective (Yang & Konrad, 2011). The question by which measures in certain contexts managers can achieve a higher innovation performance through cultural diversity has consequently a high practical relevance and can be characterized as inclusion.

1.2. Research Question

Based on this identified academic gap and the context of the German automotive industry, the intention of this thesis is to empirically address the following research questions:

- (1) Are innovative units more culturally heterogeneous than operational units?*
- (2) What impact does inclusion have on the relationship between cultural diversity and innovation performance in the context of unit orientation?*

1.3. Structure and Method

For the purpose of addressing the aforementioned interrelationships, this introduction is followed by a review of the German automotive industry and the area of cultural diversity. In addition to current key trends in the automotive industry, the German automotive industry is characterized and selected global innovation initiatives of selected automotive organizations are outlined.

Furthermore, chapter 3 provides the theoretical foundation for the following analysis. The cultural dimensions according to Hofstede and GLOBE are introduced and critically examined for their scientific applicability. Subsequently, various perspectives on diversity management will be presented. With the cognitive theory, the similarity-attraction-paradigm, the social cognitive theory (SCT), the social identity theory (SIT) as well as the resource-based theory (RBT), various socio-psychological as well as organizational perspectives on cultural diversity are illuminated and argumentation is presented. Cultural intelligence (CQ) is then discussed as a driver for an inclusive workplace and different dimensions of inclusion are addressed. Finally, various determinants of innovation management in the context of the German automotive industry are outlined before a theoretical framework with further empirical literature is presented as a basis for the upcoming analysis.

Furthermore, the methodology of this study is explained. In the course of a comparative case study, ten participants from the German automotive industry were interviewed. Valuable insights from the anonymous respondents were obtained from a total of six of the most important automotive companies in Germany.

Subsequently, the results are presented and analyzed in the context of the previously established theoretical basis. Moreover, a conceptual model is developed and presented before summarizing the results of the analysis and drawing a conclusion in relation to the research question. Finally, implications and limitations of this thesis are outlined.

2. Background

The following section provides an overview of the scientific and practical relevance of this study. For this purpose, culture is outlined as a societal dimension, and the German automotive industry is classified in terms of current trends, pressures and actions of its participants. Finally, cultural diversity and inclusion is emphasized as a potential innovation driver characterizing the significance of this dimension for MNCs.

2.1. German Automotive Industry & Innovation

2.1.1. Key Trends in the Automotive Industry

According to a study by KPMG (2022), 59% of the top executives from the automotive industry surveyed identified connectivity and digitalization as the most important automotive key trend by 2030. Connected vehicles, public transportation and a digitalized infrastructure are the prerequisites for other trends such as new mobility concepts, the further expansion of sharing platforms and the path to autonomous driving (ibid.). Oliver Hoffmann, Member of the Board of Management for Technical Development at Audi AG, considers the latter to be the "gamechanger" (Audi AG, 2022b) and to fundamentally transform mobility. The automotive industry finds itself in a phase of radical innovation, which emphasizes the novelty and transformative power of innovations and challenges the companies involved to be extremely creative, customer-oriented and flexible within a short period of time (Berret, 2022).

Furthermore, alternative drives compared to the combustion engine have been paving the way to more sustainable mobility solutions for years. Above all, electrification provides an approach that has already gained acceptance worldwide — but especially in Germany (Riederle et al., 2021). Germany is the second largest market for electric vehicles behind China, with 400,000 new electric cars registered in 2020 (ibid.). High societal pressures for greater sustainability, stringent emissions targets, and monetary incentives such as federal bonus payments further encourage this development (Berret, 2022). Fuel cell drives and various forms of hybridization complement this progression. While fuel cell drives and

synthetic fuels are still at an earlier stage of development, it is mainly hybrids that fulfill scalability with reasonable emissions (KPMG, 2022). But here, too, the development opportunities have not yet been exhausted. More efficient battery systems, new solutions for adoption in infrastructure, and better charging infrastructure have yet to be provided (StartUs Insights, 2022).

At the same time, new mobility concepts such as Mobility-as-a-Service (MaaS) are simultaneously revolutionizing the scope of business models. According to this approach, different modes of transportation are offered in a single mobility service, which removes capacity restraints and can be considered the result of the digital and technological disruption (ibid.) This is also followed by the societal trend away from status-oriented ownership towards a practical and more sustainable sharing economy (Berret, 2022).

In this context, great advancements in artificial intelligence (AI), deep neural networks, as well as connectivity and sensor technology will make mobility autonomous (KPMG, 2022; Kuhnert et al., 2018). With 98% of all traffic accidents being caused by humans, the primary benefit will be safety, but also increased comfort (Berret, 2022). Consequently, the CEO of Audi AG defines software as “[...] the most important lever for synergies and innovation” (Audi AG, 2022b).

An essential change with regard to the creation of mentioned innovations will be the rapidity and quantity of model cycles (Kuhnert et al., 2018). An increasing number of market participants and contributors will lead to an increase in the rate of innovation (ibid.). Software updates are already finding their way to customers over-the-air, but as far as hardware is concerned, the pressure on OEMs and all the players involved is steadily increasing to offer creative solutions at ever shorter intervals. Competition is becoming more intense as new opportunities, products, customer requirements and business models emerge. This poses a challenge, particularly for the established large corporations, to keep pace quickly and dynamically on the one hand, and to be able to implement their own standards of perfection in the context of complex processes und highly networked units on the other.

2.1.2. German Automotive Industry

The German automotive industry is considered the largest and most influential in the industry (Völzow et al., 2021). Developed by Carl Benz in 1886, the Patent Motorwagen is considered the first automobile and has changed individual mobility worldwide from this point onwards. The German industry benefits equally, with 24% of total domestic industry revenue coming from the automotive industry in 2019, accounting for almost a quarter of total industry revenue (Di Bitonto, 2020).

This long-term dominance is largely based on the competence and local alignment of surrounding institutes as well as the support of government initiatives (ibid.). Especially the south of Germany is characterized by automotive engineering: OEMs like BMW, Audi, Porsche or Mercedes-Benz hold their headquarters in Bavaria and Baden-Wuerttemberg and are complemented and supported by industry-leading suppliers like Bosch, Schaeffler or Draexlmaier (Völzow et al., 2021). In this context, the corporations have access to an excellent R&D infrastructure, which, in addition to the participating companies themselves, also includes universities and research organizations such as the Fraunhofer-Gesellschaft or the Leibniz Association providing a source of expertise (Di Bitonto, 2020). In addition, there are a large number of intermediary agencies that bring together young startups with special partial solutions with established OEMs and thus conduct technology scouting (ibid.). Based on this R&D infrastructure, the German automotive industry can rely on clusters in which concentrated expertise is available, generating knowledge spillovers and consequently being rightly considered among the most innovative automotive hubs in the world (ibid.).

Accordingly, this local R&D network has the benefit of short distances and reduced barriers for MNCs. Based on this argumentation, highly complex, knowledge-intensive activities tend to be located close to the headquarters (Mytelka & Farinelli, 2000).

2.1.3. Global Innovation Initiatives

The previous chapter addressed the strength of the German automotive industry and the development and density of German automotive clusters as a source of innovation and progress. Due to access to a high-quality workforce and engineers, research institutes,

suppliers in close proximity, and government support, R&D-intensive activities have traditionally been located close to the HQ (Asheim et al., 2011).

This contrasts with technological development, which makes information and knowledge increasingly accessible allowing emerging economies to develop strong knowledge bases (Holzer et al., 2019). Asheim & Coenen (2005) distinguish between synthetic and analytic knowledge bases in clusters. Engineering-intensive knowledge, i.e., problem-related and applicable knowledge, would therefore lead to innovation by combining existing knowledge in a new way and therefore meeting the criteria of the automotive industry (ibid.). Analytical knowledge bases are characterized by the creation of new knowledge and require cooperation between firms and research organizations, which is particularly necessary in the IT and science-based industries (ibid.).

With digital trends concerning the connectivity of vehicles and infrastructure as well as autonomous driving, the focus of the automotive industry is increasingly shifting from engineering to ICT. Technologies such as cloud computing, connectivity software, cybersecurity and the management of big data are aspects that lie outside the primary area of expertise of automotive OEMs. Consequently, new needs call for new ways of innovation management. A growing globalization and highly mobile workforce further causes knowledge bases to evolve very quickly and dynamically (Uzuka & Gullapalli, 2019). The environment of established OEMs is similarly becoming more dynamic and requires speed of action, however localized R&C is risky and costly at the same time due to industry-related high assets and investments (ibid.). Hence, the conventional, centralized R&D network is contrasted by an increasing effort to source skilled resources and innovative solutions abroad through collaborations with established companies, but mostly young startups (Taylor, 2018). These next-generation R&D operating models are characterized by adapting to the qualities and unique characteristics of each location and, in the sense of Teece, exploiting local resources and knowledge bases through dynamic capabilities (Uzuka & Gullapalli, 2019). This type of R&D requires more flexibility on the one hand, but also cultural intelligence and the understanding to operate in culturally diverse contexts on the other hand. The interaction between established MNCs and startups is characterized above all by a high mutual willingness to learn. The required adaptability and agility in the context of global markets is often difficult to implement for highly bureaucratic corporations with well-established

structures (Taylor, 2018). However, in addition to learning about agility, MNCs may also benefit from specific solutions for products and processes and develop new capabilities (ibid.). Moreover, they are trained to deal with uncertainty and mistakes (Audi AG, 2019).

This development of globally oriented R&D initiatives through R&D labs or collaborations with startups interactively shapes the further development of global innovation systems. Starting from specific knowledge bases in certain regions where expertise on certain fields is located, clusters emerge that become part of a global innovation system (GIN). In the context of the automotive industry, for instance, India represents a strong AI ecosystem, while China has strong expertise in electrification and Israel has a powerful knowledge base for cybersecurity, AI innovation and other ICT (Uzuka & Gullapalli, 2019).

Selected Initiatives of German Automotive Companies

OEMs and suppliers in the German automotive industry have already adapted their business model with regard to innovation management and R&D activities to the next-generation of flexible and agile initiatives cited above, characterized by a high willingness to adapt. Accordingly, the corresponding strategic initiatives are in line with the goals and intentions.

With its Audi Innovation Research (AIR), for example, Audi AG has established an innovation lab in Beijing, China, which is primarily intended to observe trends and customer requirements in the most important market and forward them to HQ (Audi AG, 2022a). China is considered to be the most important innovation driver in the industry, accounting for more than 1/3 of all patents, and is even more important than the North American region (NAR) and Europe in terms of sales figures (ibid.). According to Yu Zhao, team member of AIR, Chinese customers are "unique and complicated" and therefore deserve particular monitoring (ibid.). However, in addition to market research and technology scouting, AIR continues to operate a prototyping office, which is essential to the company's local understanding and adaptability (Seltmann, 2021). In this context, the team consists of Chinese with a German background, former students in Germany, or former expats who have already gained work experience in Germany. In order to be able to actively keep up with the current era of radical

innovations and to diffuse information and trends in a purposeful manner, this team composition is the key to success (ibid.; Audi AG, 2022a).

Another example of Audi AG are collaborations with Israeli startups such as Cognata or Otonomo, which develop and provide platforms for the simulation of autonomous driving and respectively data analysis solutions (Aimera, 2018; Cheng, 2018). In addition to silicon valley, Tel Aviv represents the largest ICT cluster in the world and features the spirit of innovation and progress with a very active startup scene (Apfelbaum & Aharon, 2019). The advantage of knowledge spillovers and great human capital leads to the fact that other automotive companies such as Continental, Bosch, BMW, Porsche or Mercedes-Benz have also entered into collaborations with Israeli startups or established innovation labs within a remarkably short period of time (Philips, 2019).

As a final example, the BMW Group has established a venture client model with the BMW Startup Garage, according to which startups are scouted in early phases and tied as potential suppliers of innovative products, services or product supplements. The aim of this is to evaluate and enable startups as long-term partners and suppliers without disposing of ownership rights (BMW AG, 2022a). With the HQ of the BMW Startup Garage in Munich and offices in Silicon Valley, Tel Aviv, Shanghai, Seoul, and Tokyo, the company seeks and mediates in the currently most important automotive and ICT cluster in the world and integrates the knowledge as well as the connections to startups in the HQ in Munich (BMW AG, 2022b).

The list of examples is not exhaustive in terms of the importance of innovation-oriented collaborations and R&D initiatives, but the required agility with regard to automotive trends is increasingly reflected in the R&D models of the companies.

2.2. Cultural Diversity

With higher digitalization and greater reliance on technologies, people become the ultimate source of competitive advantage (Corsaro et al., 2012). The automotive industry thrives on the ability to generate new solutions and create innovations. As a result, a diverse knowledge base through a diverse workforce has the potential to create more innovation (Schneider &

Eckl, 2016). Tung (2008) emphasizes that with regard to different forms of cultural diversity (nation state, ethnicity, organization and industry, global culture), a strong sense for poly contextual sensitivity is needed to not generalize but to act locally sensitive. With an increasing social debate about cultural diversity and its implications, the topic is more relevant than ever.

According to Yang and Konrad (2011, p. 9), diversity management can be defined as “[...] any formalized practices to enhance stakeholder diversity, create a positive working relationship among diverse sets of stakeholders, and create value from diversity”. However, science has shown that it is easier to create effective working relationships in workplaces that tend to be homogeneous (van Knippenberg et al., 2004). The removal of barriers to employment of historically marginalized groups and the promotion of equity and inclusion is only one part of diversity management (Yang & Konrad, 2011). Rather, the goal must be to bundle the potential of heterogeneous and homogeneous teams and to generate synergies. A McKinsey study from 2020 showed that top-quartile companies outperform bottom-quartile companies by 36% when it comes to ethnic and cultural diversity (Hunt et al., 2020). To realize these significant benefits, however, it takes more than just acquiring diverse talent. New ideas need to be given the space to be heard, and culturally diverse people require the confidence and participative safety to express opinions and feel treated equally (Dunlap, 2021; Winkler & Bouncken, 2011). This form of inclusion therefore has the potential to significantly impact the influence of cultural diversity on innovation performance.

Due to the fact that creating an inclusive workplace, which really exploits the potential benefits of cultural workforce, is associated with costs in terms of cultural training, but also coordination costs and the further removal of barriers, a cost-benefit tradeoff emerges (Seo et al., 2020). The goal of inclusive measures and strong diversity management must therefore be to keep the costs of a heterogeneous workforce lower than the achievable benefits.

3. Literature Review & Theoretical Framework

The following chapter constitutes the theoretical framework for the analyses, conceptualizations and findings that will subsequently follow. It includes a theoretical setting concerning the following relevant key areas in terms of the research question: (1) *culture*, (2) *diversity management*, (3) *inclusion*, and (4) *innovation management*. In addition, reference is made to empirical literature that places theoretical concepts in the context of the relationship between diversity management, inclusion, and innovation performance in the German automotive industry.

3.1. Culture

Bandura (2002) initially approaches culture by addressing a question that also serves as a foundation for the present work: is there a universal human nature, or are there different manifestations of human nature that develop and influence each other in a bipolar relationship to cultural milieus? This core question of cultural diversity (CD) was already posed in the 1960s by Clyde Kluckhohn, according to whom, however, “[...] all cultures constitute so many different answers essentially to the same questions posed by human biology and by the generalities of the human situation“ (Kluckhohn, 1962, p. 317). Accordingly, a picture is drawn in which human beings have fundamental biological, social, and emotional needs independent of cultural characteristics.

Based on this universal approach, a one-dimensional ordering of societies from traditional to modern was subsequently established (Hofstede, 2011). In this way, culture became inevitably linked to economic advancement, although critics of this approach also identify cultures independently of economic evolution (ibid.). Edward T. Hall (1976) added the dimension 'context' to the view of culture, referring to the nature of communication between individuals and cultural groups. According to this, information is conveyed very implicitly in high context cultures, whereas a clear and direct way of communication prevails in low context cultures (ibid.). Hence, individuals in different contexts differ in the degree of coding of information through language, which presupposes the knowledge of language and defines language as an essential component through which an increasing number of frameworks and

dimensions of culture have evolved. Among others, Parsons and Shils (1951) early on outlined and subsequently further developed a five variable model of culture that identifies cultural differences in *affectivity*, *social orientation* (self-orientation vs. collective orientation), *relationship building* (universalism vs. particularism), *social evaluation of others* (ascription vs. achievement), and the consideration of social hierarchies (linearity vs. collaterality). Discrimination, equal treatment, and questions of how colleagues are perceived in a team are more relevant than ever in the context of rapid cultural globalization. Consequently, these multi-dimensional patterns defined and designed cultural differences in content from an early stage, but lacked a comprehensive database for validation (Hofstede, 1984).

However, this changed when the Dutch cultural scientist and social psychologist Gert Hofstede gained access to a multinational database of the IT company IBM in the mid-1970s. 100,000 questionnaires from over 50 countries formed a basis that overcame the greatest weakness of cross-cultural research to date — the lack of recognition between analysis at the societal and at the individual level (Hofstede, 2011). With building studies and confirming external research, Hofstede has created a cultural framework based on already established cultural dimensions and contributions of third parties over the years with a total of six cultural dimensions, which includes a scoring model for the representation of national cultures: (1) *power distance*, (2) *uncertainty avoidance*, (3) *individualism*, (4) *masculinity - femininity*, (5) *long-term vs. short-term orientation*, and (6) *indulgence* (Minkov, 2007; Hofstede, 2011).

3.1.1. Hofstede's Cultural Framework

Hofstede (2011, p. 7) perceives culture as “[...] the collective programming of the mind that distinguishes the members of one group or category of people from others.” Accordingly, it is about a collection of individuals in a group with similarities — but still about individuals. Furthermore, Hofstede (2011, p. 7) defines a cultural dimension as “[...] an aspect that can be measured relative to other cultures”, whereby micro-aspects are bundled into dimensions and dimensions remain free of duplication. The dimensions are statistically distinct and can occur in any combination in different cultural contexts, with some combinations occurring more

frequently than others (ibid.). A strong link between Hofstede's culture dimensions and personality dimensions is noticeable (ibid.). This leads to the assumption that culture has a strong impact on the personal traits and characteristics of individuals, but equally a shaping of culture by the individuals involved and interacting in it occurs. Hofstede (2011) emphasizes, however, that the link between personality and culture — proven by applying the big five personality test according to Costa and McCrae (1992) — is initially statistically proven, but within individual cultures there is a broad diversity of individual personalities and any other approach primarily promotes stereotypes — i.e. the cognitive linking of personality traits to a cultural affiliation (Bandura, 2001). This leads to the assumption that microcultural flows can develop and dynamically change within individual cultural contexts. Hofstede, on the other hand, sees national cultures as stable and slowly changing despite intracultural variations (Berry et al., 2010). He differentiates primarily between deeply rooted cultural beliefs and superficial aspects, which are easily adaptable depending on the context (ibid.). As introduced earlier, Hofstede defines the following six dimensions of culture (Hofstede et al., 2010):

(1) Power Distance

Power distance is defined as the degree to which comparatively powerless members of organizations or institutions accept an unequal distribution of power, i.e. a strong hierarchy (Hofstede, 2011). Human equality takes place to varying degrees with varying social acceptance, but is found in almost every society (Hofstede, 2009). Small power distance cultures strive for a legitimized use of power, which is not a given fact, but an earned result, for example a democratic election or a deserved promotion. High power distance cultures not only recognize the power imbalance, but additionally perceive this as desirable and in some circumstances stabilizing (Beugelsdijk, Kostova & Roth, 2017; Heine, Foster & Spina, 2009). According to Winkler and Bouncken (2011), due to a deep embeddedness in cultural beliefs and values, a large variance in power distance is considered to be among the serious challenges within multi-cultural teams or diverse contexts. With regard to the individual countries' scores, Latin, Asian, African, and Eastern European nations in particular tend

toward higher power distance, while the Anglican and German-speaking regions practice lower power distance (Hofstede et al., 2010).

(2) Uncertainty Avoidance

The dimension of uncertainty avoidance describes the extent to which an organization or society “[...] relies on social norms, rules, and procedures to alleviate unpredictability of future events.” (GLOBE Project, 2022). Consequently, dealing with ambiguity and unstructured contexts that are new and unpredictable is addressed (Hofstede, 2009). Strong uncertainty avoidance cultures are characterized by the desire for unchanging social conditions and the belief that new ideas represent potential risks. Eastern and central European countries, Latin nations as well as Japan and the German-speaking region are characterized by rather high uncertainty avoidance, while the Anglo-American region and Chinese culture show weak uncertainty avoidance (Hofstede, 2011).

(3) Individualism

Individualism (Western countries) contrasts with collectivist cultures (less developed and Eastern countries), which are characterized by highly integrated groups that have a propensity for binding and loyal patterns of behavior (Beugelsdijk & Welzel, 2018). Individualistic nations instead convey the approach of loose ties, individual goals and objectives, and relationships that serve the cause. Collectivist structures, moreover, show a clear tendency toward harmony and group-oriented thinking (Hofstede, 2011).

(4) Masculinity - Femininity

The dimension of masculinity versus femininity is related to the division of emotional and cognitive roles between men and women (Hofstede, 2011). As with the distinction between individualism and collectivism, this refers to disparities in social characteristics, not individual traits. Studies have shown that men's values vary more within different contexts than women's values (ibid.). Specifically, a high degree of assertiveness is attributed to

masculinity, while femininity is associated with characteristics such as caring and restraint (Hofstede, 2009). Furthermore, a high score for masculinity indicates the pursuit of competition, success and status. In this respect, Germany can be classified as a high masculinity country, because aspects such as performance and the pursuit of perfection are omnipresent (Hofstede Insights, 2022a). It is noticeable that feminine countries and organizations have the same feminine characteristics for men and women, but masculine countries register a gap between men's and women's values. This must be considered when evaluating countries and attributing values to them. High masculinity occurs not only in German-speaking countries but also in Japan, while Nordic, Latin and Asian countries tend to be characterized by high femininity (Hofstede, 2011).

(5) Long-Term vs. Short-Term Orientation

The distinction between long-term and short-term orientation refers to the emphasis of people's efforts (ibid.). Short-term orientation implies a tendency toward traditions, past successes, social spending and consumption, and the perception that certain conditions are irrevocable (Hofstede, 2009). Long-term orientation, on the other hand, is characterized by a high degree of self-efficacy, the faith in being able to accomplish tasks independently and successfully, large savings, and the belief that traditions and values are adaptable to new developments and contexts (Vinney, 2019; Beugelsdijk & Welzel, 2018). East Asian countries and Eastern and Central European countries are characterized by long-term orientation, while the United States of America (USA), Australia, Latin American, African, and Middle Eastern countries are short-term oriented (Hofstede, 2011).

(6) Indulgence

The last cultural dimension according to Hofstede was added in 2010 based on Minkov's contributions and, with the distinction between indulgence and restraint, describes the tendency of societies to recognize natural human desires such as enjoyment, happiness and freedom (indulgence) or to regulate and limit the satisfaction of human and social needs in the course of social norms (restraint) (Hofstede et al., 2010). Like long-term orientation vs.

short-term orientation, this dimension is defined by the extent of self-efficacy. Freedom of speech, sexual norms and the personal perception of control over one's own decisions and experiences characterize a high level of indulgence, whereas Eastern European, Asian or Muslim countries with sexual taboos, a greater urge for structural order and acceptance of apparently irrevocable facts are characterized by low self-efficacy (Hofstede, 2011). Again, these are overall societal tendencies that may differ in many isolated cases. In this respect, Bandura (2001) speaks of a distinction between self-efficacy and collective efficacy, according to which the degree of self-efficacy can always deviate from collective efficacy, but a social tendency can be recognized in different contexts when it comes to the question of collective agency.

3.1.2. The GLOBE Framework

The Global Leadership and Organizational Behavior Effectiveness (GLOBE) project has been developed extensively over many years in collaboration with a variety of researchers to give managers and organizations a perspective on how to deal with cultural differences and to provide a guideline on how to operate best in foreign markets (GLOBE Project, 2022). With the aim of incorporating Hofstede's cultural framework but developing it in a new age (1990s) and adapting it to the prevailing spirit of the times, more than 17,000 managers from 62 countries were integrated into the project by 170 researchers from 60 countries (House et al., 2004). The findings of this research resulted in a scoring process for countries into cultural clusters, grouping affected countries into relevant concentrations according to similarities while retaining validity about cultural characteristics (Table 1). While classified countries in each cluster share similar cultural profiles, many core values such as honesty and trustworthiness are elements that are highly valued in any cultural pattern (GLOBE Project, 2022).

The refinement of Hofstede's framework can be recognized in the fact that all five of the initial dimensions are still valid and show high relevance in the sense of GLOBE. Power distance, masculinity, future orientation and uncertainty avoidance were adopted as cultural dimensions. Merely individualism was context-specifically extended to institutional and in-group collectivism. Institutional collectivism describes "[...] the degree to which

organizational and societal practices encourage the collective distribution of resources", while in-group collectivism determines the affiliation to organizations and cultural groups as well as the commitment and pride in these (GLOBE Project, 2022). With performance orientation and humane orientation, only two further cultural dimensions were established (Raimo et al., 2019):

Performance Orientation

Performance orientation refers to the extent to which a collective aspires to a meritocracy, remunerates higher performance socially, and defines success and competition as a societal driver (House et al., 2004).

Human Orientation

This dimension categorizes cultures according to their general emphasis on fairness and altruism (GLOBE Project, 2022). Organizations, institutions, or countries with high humane orientation are characterized by encouraging and rewarding good virtues, collective solidarity, and caregiving (ibid.).

A significant difference between the Hofstede and GLOBE frameworks is that Hofstede implies a fundamentality of cultural characteristics, whereas the GLOBE project distinguishes between cultural practices and cultural values. As a consequence, a comparison can be drawn between cultural clusters, according to which group practice scores either meet the intended group value score, or scores differ significantly from each other. Consequently, there are cultures that convey certain values, but in reality do not meet their own standards, and contexts in which a more realistic representation of their own cultural values takes place. This different degree of overestimation or realistic classification opens up another dimension that is not included in Hofstede's cultural framework.

Anglo	Confucian Asia	Germanic Europe	Latin America	Nordic Europe	Middle East	Sub-Saharan Africa	Eastern Europe	Southern Asia	Latin Europe
Australia	China	Austria	Argentina	Denmark	Egypt	Namibia	Albania	India	France
Canada	Hong Kong	Germany	Bolivia	Finland	Kuwait	Nigeria	Georgia	Indonesia	Israel
England	Japan	Netherlands	Brazil	Sweden	Morocco	South Africa	Greece	Iran	Italy
Ireland	Singapore	Switzerland	Colombia		Qatar	Zambia	Hungary	Malaysia	Portugal
New Zealand	South Korea		Costa Rica		Turkey	Zimbabwe	Kazakhstan	Philippines	Spain
South Africa (White)	Taiwan		El Salvador				Poland	Thailand	Switzerland
USA			Guatemala				Russia		
			Mexico				Slovenia		
			Venezuela						

Table 1. Country clusters according to GLOBE (GLOBE Project, 2022).

Cultural Characterization of Germany according to Hofstede and GLOBE

This paper addresses the relationship between cultural diversity management and innovation performance in the German automotive industry and examines how inclusion moderates this relationship. The automotive industry has an enormous importance in the German economy as well as being one of the strongest and most important industries in the world (Di Bitonto, 2020). As globally operating MNCs, OEMs and automotive suppliers operate in different markets and are confronted with different cultural contexts. It is, nevertheless, useful to focus on the home country of these companies first.

Based on Hofstede's dimensions, which have been further developed in the sense of the GLOBE project, the German cultural area can initially be described as very competitive. According to figure 1 as well as figure 2, Germany can be characterized as individualistic, masculine, and restrained with high uncertainty avoidance and strong long-term orientation.

Germany is characterized by direct communication channels and a performance-driven environment that generates high expertise and self-efficacy, with individual action tending to depend on context and personal capabilities. A high uncertainty avoidance indicates that individuals in German-speaking countries prefer to be in control of their situations and to make rational decisions that are only partially risky. A high long-term orientation suggests that Germany is forward-looking, can adapt traditions to new developments and is more pragmatically oriented. In this context, Beugelsdijk, Kostova and Roth (2017) identified in a comprehensive study the German-speaking countries as the only cultural areas where supra-national identification is higher than national identification. This suggests that the degree of cultural pride and identification can vary equally strongly intraculturally. An evaluation according to cultural dimensions must therefore take place very precisely and include the separate, identity-giving sub-cultures in Germany — especially considering the reunification in 1990.

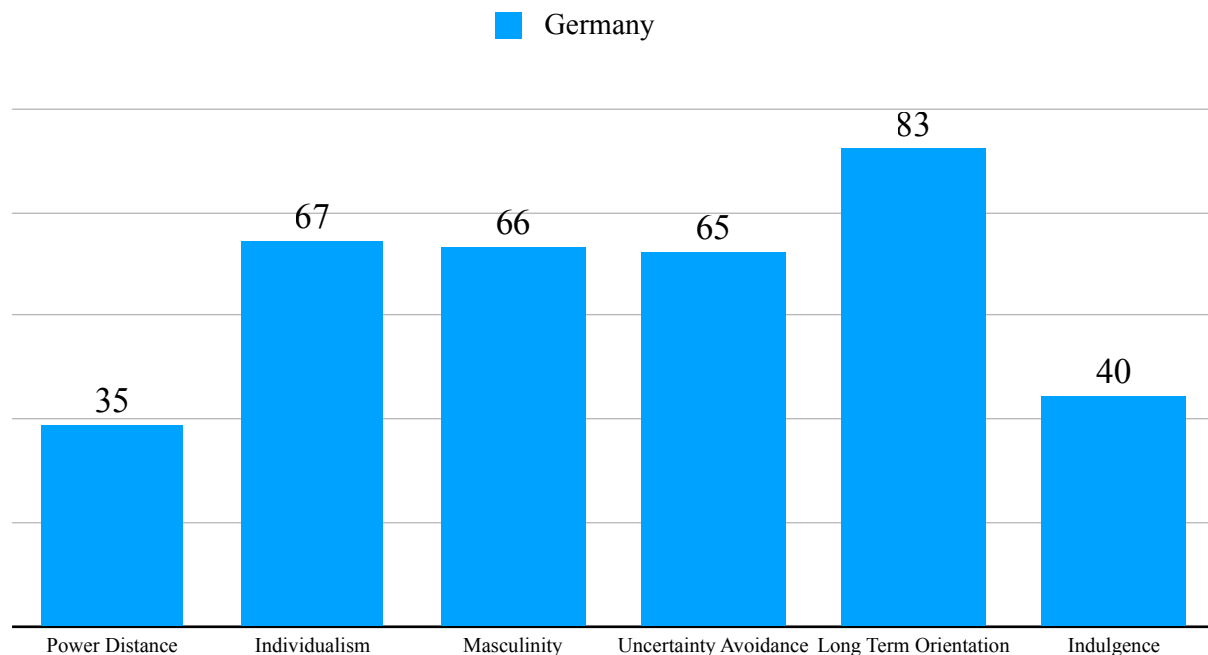


Figure 1. Scoring of Germany according to Hofstede's cultural dimensions (Based on: Hofstede Insights, 2022a)

As can be seen in figure 1 and figure 2, the values of Hofstede and GLOBE diverge with regard to the dimension power distance. As already stated, GLOBE's evaluation includes a cultural value score and a cultural practice score. For Germany it is noticeable that there are substantial discrepancies between the own cultural value understanding, in other words the demands and own standards, and the realistic conversion in practice. Value and practice are combined in Hofstede's score, although the communicated ideal of dimensions that seem rather negative, such as power distance, leads to a lower value for Hofstede, after which the cultural practice score according to GLOBE for power distance is comparatively high (GLOBE, 2022a; Hofstede Insights 2022a). This also applies to dimensions such as assertiveness, i.e., masculinity, which suggests that Germany is pursuing a change in the status quo and desires more gender egalitarianism as well as less assertiveness and power distance (ibid.). A low value for humane orientation and a high value for performance orientation according to GLOBE coincides with the comparatively high value of masculinity based to Hofstede (ibid.).

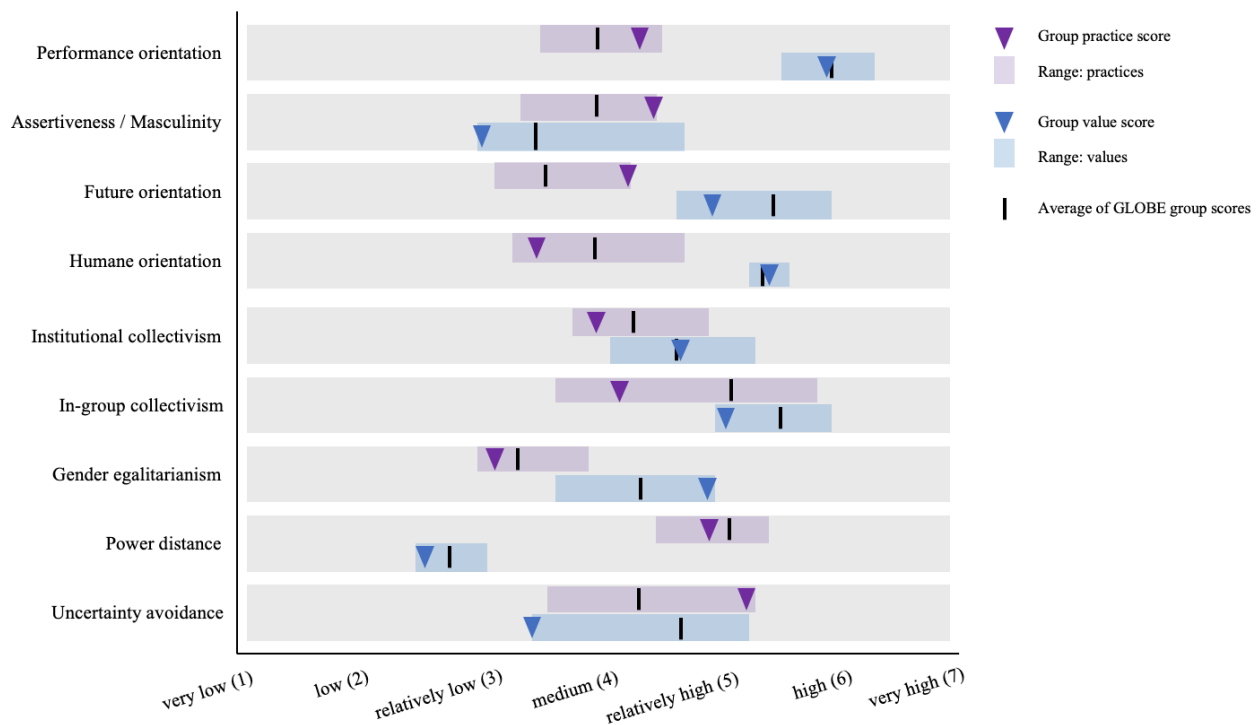


Figure 2. Cultural practices and values in the Germanic Europe group according to GLOBE (Based on: GLOBE Project, 2022a)

3.1.3. Critics on Hofstede and GLOBE

Based on the previous work, Hofstede's cultural dimensions and the GLOBE project have the common goal of identifying potential contextual differences in the operating spheres of MNCs and optimizing cross-national interaction. Cross-national differences increase uncertainty by slowing down or even preventing knowledge flows between countries or cultures (Berry et al., 2010). In this context, culture is an essential driver of cross-national differences, but critics emphasize that there are additional cross-national distances that can influence MNCs in many ways (ibid.). Kutschker and Schmid (2011) highlight that neither the Hofstede nor the GLOBE study, despite extensive scope, can fully explain the diversity of cultural influences on organizations. Accordingly, "[...] the relationships between culture and its effects on management [...] remain speculative and based on considerations of plausibility" (Kutschker & Schmid, 2011, p. 775). Berry et al. (2010) approaches the problem of cross-national distance through an institutional perspective and expands the influencing variables to include economic, financial, political, administrative, demographic, knowledge, geographic as well as global connectedness distance. However, this is contrasted with the view of Hofstede supporters that culture — a highly social construct associated with each person's growing up and origin — influences every one of these additional distances from the ground up (Beugelsdijk et al., 2018). Accordingly, it can be assumed that cultural dimensions and values can have considerable influence on, for instance, demographic characteristics or political distance. Nevertheless, the criticism of a strong one-dimensionality with regard to cross-national distance and insufficient explanation with purely cultural indicators persists, even though culture is analyzed in a very multi-dimensional manner.

Tung (2008) further criticizes that the frameworks and underlying conceptual foundation of Hofstede and GLOBE make two false assumptions: first, the assumption of cultural homogeneity, and second, the assumption of cultural stability. While Hofstede has acknowledged a certain dynamism of cultural contexts over time, culture continues to be defined as a very stable construct that changes only slowly and under high external influences or costs (Hofstede, 2011). Tung (2008) distinguishes between the cultural and technological imperative with regard to the statics of culture. According to the cultural imperative, particular cultural expressions of individuals can be changed at different rates. Similar to an

onion model, important and robust core values and beliefs lie in the middle, with more and more layers of more quickly changeable and dynamically adaptable cultural attributes lying on the outside. Hofstede similarly acknowledges this dynamic (Hofstede, 2011). According to Tung, however, the technological imperative does not find its way into Hofstede's and GLOBE's considerations. Consequently, the further globalization of goods through cross-national interactions, migration and an expanding global workforce would lead to cultural blending, in which cultural differences would be washed out over time and new sub-cultures would emerge.

Similarly, Dätsch (2016) sees culture rather as a multi-layered construct that evolves over time due to increased interactions among people from different national and cultural contexts. In addition, there is an enormously high level of intra-cultural developments. For example, table 1 (country clusters) shows that in the course of the GLOBE project 62 nations were grouped into only ten country clusters and up to nine nations are classified in a single configuration with identical cultural values. In addition, this superficial distinction of cultural contexts does not consider the interaction of the relevant countries.

According to Tung (2008), cultural values are caused by external events. These external events are not limited in the number of times they occur or the speed of their impact. Wars, forced displacement, or socioeconomic drivers can lead to rapid cultural blending in the wake of an interconnected world and rapidly accessible resources, making it increasingly difficult to attribute certain behavioral patterns or cultural dimensions to specific cultural groups (ibid.).

Dätsch (2016) further provides criticism for the lack of distinction between national culture and professional culture. In Hofstede's and GLOBE's conception, primarily cultural influence is the determinant that provides for firm behavior in cross-border relations and management of people. The question of how MNCs internally, but also externally influence culture as well as its development in certain contexts is disregarded. Accordingly, "[...] the relationships between culture and its impact on management [...] remain speculative and based on plausibility considerations" (Kutschker & Schmid, 2011, p. 775). This aspect of the relationship between culture and MNCs is addressed, among others, with diversity management and defines the content of the following chapter.

3.2. Diversity Management

International business research, especially on interactions of MNCs in multi-cultural settings, has long been concerned with the impact of high cultural diversity in the workforce, among partner companies, customers or other stakeholders. Over time, competing views have emerged, each attempting to explain how diversity is either harmful or beneficial to organizational outcomes and — of relevance to this paper — innovation performance (Mello & Rentsch, 2015). Diversity can be understood as the distribution of differences among members of a certain group with respect to specific attributes (Czerny et al., 2011). Geopolitical, social, economic, and technological advancements in recent decades have led to new approaches and opportunities for culturally diverse people to engage with each other. The complexity of integrating this diversity defines one of the main challenges of MNCs (ibid.). The multitude of different experiences, views, and approaches of culturally diverse environments are associated as an important driver for inventiveness, intelligent problem solving, and creativity (Mitchell et al., 2017). This is contradicted by higher costs due to slower processes, adaptation measures, cultural trainings, or increased conflict and coordination efforts (Sherrerd, 2019). Accordingly, diversity can be viewed from two perspectives.

3.2.1. Cognitive Diversity

According to Miller et al. (1998), the term cognitive diversity (CGD) initially encompasses the range of team member characteristics, such as expertise, experiences, or views. Culture has an influential effect on cognitive experiences and attributes, making cultural diversity an effective variable on cognitive diversity (ibid.). Following Bender & Beller (2016), the influence of cultural background on cognition is widely discussed in psychology, whereby the content of cognition in particular — i.e. values as well as behavioral patterns and communication — is certainly influenced by the cultural context. The cultural background provides a set of beliefs and values that guide our behavior, attention, and interaction with other people and collectives in dynamic contexts (ibid.). In this regard, human cognitive processes are always dependent on the environment and action, which is why they may differ

in different contexts. Moreover, cognitive processing is trained with continuous confrontation with information input (ibid.). This diversity of cognitive formatting and adaptation of specific situations defines the advantages for MNCs, which may eventually result in more discussion, learning opportunities and knowledge creation (Mitchell et al., 2009; Horwitz & Horwitz, 2007). Consequently, cognitive diversity theory represents a viewpoint from which the benefits for innovation performance and organizational outcomes predominate. Building on this, Sherrerd (2019) finds that well-functioning teams with high cultural diversity offer a pool of creativity and innovation, which is why they are able to outperform homogeneous teams when collaborating (Mello & Rentsch, 2015). In the same way, however, it must be emphasized that the approach of cultural diversity and its integration must be manifested in the firm's vision and strategy. Reynolds and Lewis (2017) further find that cognitive diversity also affects an extended learning process and diverse teams can outperform homogeneous units after a period of adaptation. According to Mitchell et al. (2009), units that value diverse values and backgrounds are more likely to raise and discuss alternatives, allowing diverse teams to have a significant impact on the work environment and the degree of inclusion through a high degree of CGD itself (ibid.). This is related to the fact that a state of increased disagreements and low cohesion due to cultural differences can lead to groupthink being prevented and previously unchallenged ideas coming to fruition (Miller et al., 1998). Consequently, a certain level of discussion is in the sense of knowledge creation, whereby discussions increase the understanding in the team and a cultural learning process is facilitated (ibid.). At this point, however, emphasis should be placed on the management and the distinction between constructive and destructive discussion. If insufficient attention is paid to the coordination of these influencing variables, cultural diversity ends in slower processing, higher costs and in-group conflicts.

This is illustrated by the reasonable view that high degrees of diversity can lead to communication failures and conflicts (Miller et al., 1998). According to this perspective, culturally diverse individuals are so strongly influenced by their views and behavior patterns that a coexistence of highly diverse groups complicates integration (Mello & Rentsch, 2015). The similarity-attraction paradigm, social cognitive theory, and social identity theory, emphasize that high diversity can inhibit organizational performance.

3.2.2. Similarity-Attraction Paradigm

The similarity-attraction paradigm addresses the tendency of individuals to feel attracted to people who resemble themselves or have similar views, values or personality traits (Byrne, 1997). In this regard, Byrne et al. (1986) find that individuals initially screen subjectively negative characteristics in order to eventually make the most appropriate choice from a pre-selection when deciding on relationship building. In terms of this two-stage process, dissimilarities, negative attitudes, or physical unattractiveness are used to exclude certain groups of people before positive characteristics and similarities are used to create a sense of belonging in the second stage (ibid.). Heine et al. (2009) primarily identify positive feelings of rewarding interaction as a main driver for the similarity-attraction effect (SAE), the majority of which occurs among similar individuals. In addition, individuals have an emotional need to be liked by others, which is also more likely to be shared by similar individuals (ibid.).

However, the similarity-attraction paradigm faces the criticism that subjective decisions are based on a variety of information and that people constantly cope with situations of incomplete information (Heine et al., 2009). Individuals make use of so-called heuristics, i.e., short-cuts to make a decision based on previous experiences and stereotypes in a simplified data situation when information is insufficiently available in diverse contexts (Kahneman, 2002). Furthermore, SAE has been studied almost exclusively in a specific cultural context (USA). Transferability across cultures is questioned by Heine et al. (2009), who add a cultural lens to a sociopsychological subject.

Comparing Canada and Japan, the authors find that similarity is not equally attractive in all cultural settings (ibid.). The two-stage process of relationship building according to Byrne et al. (1986) continues to be valid, but the evaluation of criteria is based on a different understanding of attractiveness. Accordingly, reasons such as a lower relational mobility, i.e., a lower level of opportunities for relationship building, as well as a lower self-esteem are reasons that lead Japanese to regard similarity as less attractive (ibid.).

These findings show that negative effects of SAE on multi-cultural teams may vary depending on the cultural context. Moreover, cultural blending further reduces the importance of such interaction. Differences can change dynamically, making it increasingly difficult to

assign specific cultural characteristics. Consequently, it becomes clear that determinants that trigger negative or positive effects on organizational performance through cultural diversity must be made dependent on the context and that a universal prescription of characteristics in the sense of such theories is to be considered equally critical as a general assignment of cultural characteristics by national borders.

3.2.3. Social Cognitive Theory

Cultural diversity can be further addressed from the perspective of social cognitive theory (SCT), which also emphasizes a primarily detrimental influence on organizational outcomes of MNCs. Initiated as the social learning theory by Albert Bandura and further developed in 1986 as the social cognitive theory, it explains how individuals acquire and sustain behavior while simultaneously considering the social environment in which people execute this behavior (Bandura, 2001). According to this theory, the way in which people learn such behavior is determined by past experiences and values, as well as their expectations of a certain environment, making SCT highly relevant for the relationship of cultural diversity in business units to the innovation performance of MNCs.

Following Bandura (2002), SCT assumes a role in which human behavior is analyzed from an agent view with respect to adaptation and change. This behavior derives from three dimensions: (1) personal agency, in which behavior is performed individually, (2) proxy agency, in which individuals achieve desired outcomes by influencing others, and (3) collective agency, in which behavioral patterns serve the common good and the achievement of collective goals (ibid.). The bridge to cultural diversity is built by the fact that the combination, extent, as well as blending of these three determinants varies cross-culturally (ibid.). Based on this, individuals act as agents who both influence and are influenced by their environment. In order to be able to make decisions when information is limited, individuals make use of heuristics and stereotypes in the context of SCT (Bandura, 2005). Accordingly, other people and groups are categorized and even discriminated against on the basis of external or demographic characteristics such as sex, race, gender or ethnicity.

The most significant mechanisms of human agency are beliefs and personal efficacy (Bandura, 2002). Beliefs represent robust values that individuals bring from their cultural context and shape their conception and understanding of the world. Self-efficacy can be described as a person's trust in being able to perform desired actions independently, even in severe circumstances, based on his or her own competencies (Vinney, 2019). Behavioral capability further describes having the understanding and ability to perform a particular behavior. According to Bandura (2001), these are the basic requirements for observational learning, whereby people observe other behavior in a certain environment and, with behavioral ability and self-efficacy, are able to imitate behavior. According to Luszczynska and Schwarzer (2015), the extent to which a person adopts an observed behavior depends on motivational processes, which in turn are determined by expected outcomes. Accordingly, an expected punishment of certain behavior may lead to not executing it despite observational learning and a high behavioral capability and self-efficacy. Furthermore, the decision for or against a particular action can depend on high contrast to one's own values and perspectives. This implies that culturally diverse units are confronted with the challenge of integrating strongly divergent views into a goal-oriented and uniform behavior in the interest of the company.

Besides self-efficacy, which determines human functioning through cognitive and motivational processes, Bandura introduces the importance for collective efficacy, which can be defined as an "[...] emergent group-level property that embodies the coordinative and interactive dynamics of group functioning." (Bandura, 2002, p. 271). According to this, collective efficacy results from the self-efficacy of participating members, but differs in some areas. People's shared beliefs in their collective efficacy is equally dependent on the degree of collective effort and consequently creates an atmosphere of cooperation. Based on a high degree of interconnectiveness due to advancing ICT and increasing cross-border interactions, a strong sense of collective efficacy is needed to integrate these dynamics profitably in society and business and to exploit the potential of a culturally diverse workforce (Bandura, 2002).

As in the context of the similarity-attraction effect, however, social cognitive theory raises the question of cross-cultural generalizability. Earley (1993) conducted a comparative study of self-efficacy and group productivity in the United States, China, and Hong Kong and found

that managers achieved the highest personal efficacy and group productivity when their personal beliefs and orientation corresponded to the organizational social system. Americans, who according to Hofstede tend to be collectivist, had the highest performance in a group-oriented setting, while Chinese individualists showed the highest output in an individualistic framework (ibid.; Hofstede Insights, 2022b; Hofstede Insights, 2022c). However, personal orientation was a main driver of the effects, thus contributing intracultural diversity as an important aspect in the context of SCT. It is this intracultural diversity, in turn, that often results in misleading generalizations and individuals no longer defining human behavior as socially situated and contextualized.

Further criticism of SCT appears in the fact that although cultural dynamics are acknowledged as a driver for learning processes and adaptation, SCT assumes that changes in the environment necessarily result in changing behavior of operating actors (Bandura, 2005). SCT provides the foundation for learning processes, but motivational processes of a cognitive nature determine the execution of behavior. Cultural influences can be very robust depending on their origin — this component of motivation is strongly neglected by SCT. Furthermore, it remains unclear to what extent the influencing mechanisms of person, behavior and environment interact.

3.2.4. Social Identity Theory

The question of identity concerns science, but also each person individually. The issue of defining who you are, what you represent, or who you want to be is familiar to every child from an early age. In the context of IB, stakeholders are just as often exposed to this question. Every organization represents certain values and develops an identity that is to be carried and embodied by its employees, but also by its customers. In the course of cultural globalization, MNCs are inevitably confronted with the situation of understanding and integrating different identities — relating to customers or employees. The concept of identity as well as the social identity theory (ICT) is therefore closely linked to culture in that it assumes that people place themselves in relationships in which they assign a certain group or cultural background. While Tajfel's (1981) social identity theory focuses primarily on psychological motivations, the similar, further developed self-categorization theory by Turner et al. (1987) focuses on the

cognitive mechanisms that lead to the categorization of individuals, thus following the argumentation of the cognitive theory but coming to different conclusions. However, both theories are comparable in the essence of the statements and vary mainly in the perspective as well as the origin of social identity development.

Tajfel's social identity theory accordingly describes cognitive factors as the basis, with motivational influences as an additional dimension, through which individuals categorize and internalize group labels as their own identity (Huddy, 2001). This assignment to a cultural in-group also leads to cognitive processes that result in discrimination against out-group members — including collective settings (*ibid.*). Examples of this phenomenon can be found, for instance, in children of an ethnic minority who, in the context of their sports clubs or school classes, constantly describe themselves as being part of this ethnic minority. Mullen et al. (1992) found that this form of group salience even leads to the further development of in-group bias. Furthermore, in the question of identity, a distinction must be made between personal and social identity (Brown, 2000). While a high level of control is felt in a private situation, behavior in the group is increasingly determined by category-based processes.

Turner and authors (1987) develop in terms of self categorization theory primarily the cognitive origins of identity development. It shifts the conventional categorization of members of a grouping to a blurred perception in which some members are seen as typical or more superior with better fulfillment of traits and characteristics. Lakoff (1987) defines this behavior using prototype theory, which generalizes social traits equally to stereotypes and suggests an ideal-typical attribution of characteristics to a particular group as positive or negative (*ibid.*). As a result, personal perceived similarity to these prototypes of particular groups has considerable influence on the development of social identities.

Furthermore, self categorization theory affirms that an attribution of social identities is strongly context-driven and implies that salient self-categories as an intrinsic variable depends on characteristics such as age, gender, or other cultural influences and can dynamically adapt to new contexts (Trepte, 2013). This supports the definition of culture as heterogeneous, context-dependent, and flexible, and further implies a great potential of cultural adaptation and diversity with regard to the question of social identity. Based on Brown (2000), individuals consequently face a variance between personal and social identity,

in which individuals may have to change between these identities and adapt to the context in each case (Stets & Burke, 2000). The degree of this changing mechanism depends on the correspondence between personal and social identity. Consequently, the dynamics of culture and social identity is an interplay in which social identity reacts as highly responsive to social comparative contexts and group prototypes vary across ideal-type attributes and social trends across social settings and can lead to further identity shifts in different cultural environments.

Tajfel (1981) further considers motivational influences, which are grounded in cognition, as formative beyond cognitive processes. Accordingly, when assigning an identity, the origin of certain groups must also be considered and a distinction must be made between high-status and low-status groups. This implies that outsiders face a greater challenge to become part of a desired group than in-group members who have already grown up in this social identity (ibid.). This indicates that people with a different cultural background are confronted with the task of integrating and that the success of this integration depends on their own measures on the one hand and on the receptiveness and willingness of in-group members on the other hand. Studies show that people with high self-esteem are more often part of the in-group and tend to exclude out-group members to protect their own group standing (Huddy, 2001). Out-group members subsequently perceive a necessity to enhance their own group characteristics, which, if not successful, may even lead to a denial of out-group membership and identity (ibid.). These ethical considerations play a significant role in identity formation, the extent of adaptability as well as integration. The question of the impact of cultural diversity management in the context of innovation performance is therefore dependent on the organizational capability to create a space of social identity in which barriers are reduced and integration is promoted and the shift of personal and social identity can succeed in the sense of corporate success and all actors involved.

3.2.5. Resource-Based Theory

Cognitive diversity theory, the similarity-attraction paradigm, SCT, and SIT are selected psychological frameworks that provide a perspective on the potential of influencing firm outcomes by explaining the behavior of individuals from different contexts through cognitive processes. Resource-based theory (RBT) reflects an approach from IB research, according to

which cultural diversity can be defined as a strategic tool for sustainable competitive advantage (SCA) (Barney et al., 2001).

In this context, the focus of RBT addresses the underlying question of the composition of resources that MNCs use to achieve performance heterogeneity in different contexts (Yang & Konrad, 2011). Accordingly, companies have physical, financial, human, and corporate capital resources that are bundled in the course of organizational activities and are intended to lead to SCA within a specific configuration (ibid.). A sustainable competitive advantage is created only by those resources that are valuable, rare, imperfectly imitable and non-substitutable (Barney, 1991). Valuable resources enable a firm to generate and implement strategies that improve efficiency of own actions. Rare resources are further defined by the criterion that they are not simultaneously possessed by a wide range of firms or competitors, which can give them a competitive advantage. Imperfectly imitable resources appear as resources that are difficult to obtain, often due to causal ambiguity or high social complexity. However, only those resources lead to a sustainable competitive advantage that are also not substitutable, i.e. that appear on the market without an equivalent (Barney et al., 2001).

For long-term competitiveness, innovation-driven industries such as the automotive industry are characterized by the need to generate SCA and differentiate themselves from the competition. However, innovations have to be created, and do not emerge through natural processes or are given. Human resource is critical for innovation performance in terms of imperfectly imitability and non-substitutability, which means that a high level of expertise in the workforce can be defined as a potential driver for SCA (Kochan et al., 2003). Due to high diversity in backgrounds, problem-solving, and expertise, multi-cultural teams offer great opportunities to generate this SCA (Czerny et al., 2011). Barney and Wright (1998) emphasize the high relevance for MNCs of having complex system-level intangible resources that come into play through the interactions of individuals in complex environments. System-level resources are defined as organizational capabilities that occur only in relationships and therefore cannot be imitated by competitors at all or only under very costly conditions (Czerny et al., 2011; Barney, 1991).

Nevertheless, there are companies that are less aware of the potential of multi-cultural teams and underestimate their value (Yang & Konrad, 2011). Others overestimate the value and get

into the situation of overspending for cultural diversity management (ibid.). Consequently, it is important to build diversity management as a firm capability and valuable resource itself, which can be used to respond appropriately to context-specific situations and to practice diversity management when it is necessary and serves corporate purposes (Kochan et al., 2003). The outcomes of diversity management practices are thus highly dependent on one's own understanding of diversity management and the knowledge of when such practices create value. The development of cultural capabilities such as CQ through cultural training as well as other inclusive measures such as the development of a trust base in the team, a feedback culture as well as high procedural justice is therefore required (Lubiano, 2019; Foss et al., 2012). Consequently, appropriate and effective diversity management has the potential to trigger organizational outcomes such as lower costs, higher innovation and greater product differentiation (Kochan et al., 2003; Czerny et al., 2011).

Due to organizational change such as more dispersed units and R&D centers around the globe, market-specific product requirements in the automotive industry and a highly globalized workforce, MNCs in the German automotive industry find themselves in a dynamic and highly competitive environment. Flexibility and change as well as great innovation pressure therefore indicate a strong dependence on diverse teams, since multi-cultural teams have a higher potential for adapting to contexts, trends and requirements more quickly (ibid.). According to Teece (2014), this form of adaptation to dynamic environments for the benefit of companies is referred to as dynamic capabilities.

3.3. Inclusion

This chapter aims to provide an overview of different dimensions of inclusion in the context of multi-cultural teams in MNCs and to introduce the development of cultural intelligence (CQ) as an essential capability for realizing their potential. While most companies recognize the importance of cultural diversity management as a source of innovation and organizational performance, due to challenges associated with communication, coordination and conflict management, many fail to realize the full benefits of multi-cultural teams and generate SCAs (Chow, 2018). On paper, the majority of organizations are diverse, but to leverage all untapped resources of skill, talent, and creativity, an inclusive work environment is needed

that leads to higher team performance through management and team members and goes beyond simply recognizing demographic statistics (Lubiano, 2019; Hunt et al., 2020). Inclusion must therefore be distinguished from the term cultural diversity management in that it is about "[...] developing the organizational capacity to leverage cultural diversity as a resource [...]" (Roberson, 2006, p. 29).

In this context, an inclusive workplace can be defined as an environment in which cultural differences of team members are not only recognized, but also how these differences can contribute to organizational success (Cottrill et al., 2014). Furthermore, an inclusive workplace is defined by measures that prevent all forms of discrimination and bias and create an environment in which proactive behavior regarding cultural diversity is encouraged (ibid.; Bearman et al., 2017).

3.3.1. Cultural Intelligence

The previous chapters have provided theoretical foundations and rationales for the potential positive (cognitive diversity theory, RBT) and negative (similarity-attraction paradigm, SCT, SIT) contributions of cultural diversity to organizational outcomes and innovation performance. MNCs are inevitably exposed to the situation of diverse cultures and therefore have to develop capabilities how to not only master this context, but how to best use it for their own benefit. The concept of cultural intelligence (CQ) was initially developed for global managers who are constantly operating in changing and culturally diverse environments (Earley & Mosakowski, 2004). For the purpose of this paper, however, cultural intelligence can also be applied as a key attribute of culturally heterogeneous unit members and managers — both, in-group member and out-group member, to keep an adaptation phase on both sides as short as possible and to develop a common social identity based on inclusive practices. Globalization has changed the configuration of cultural training, and with regard to new needs such as shorter periods and multi-cultural teams, the development of personal competencies rather than studying other cultures is at the forefront of MNCs (Earley & Peterson, 2004). The required speed of action in dynamic environments such as the highly innovation-driven and competitive automotive industry consequently requires high cultural intelligence as a social capability in order to be able to exploit and master the advantages of

cultural diversity and the challenges of a global operating environment. Thus, cultural intelligence is one of the essential characteristics of highly inclusive MNCs, where leaders prioritize culture and have the ability to exploit and unleash the benefits of cognitive and cultural diversity through inclusive actions and high CQ (Sherrard, 2019).

Cultural intelligence "[...] refers to a person's capability to function effectively in intercultural environments" (van Dyne et al., 2016) and can be defined as the ability to learn from specific cultural settings for future events. CQ is composed of 3 facets: (1) metacognitive facet, (2) motivation facet, and (3) behavioral facet (Earley & Peterson, 2004). Accordingly, CQ represents a further development of social and emotional intelligence, in which a system of interacting abilities and personal attributes leads to a greater understanding of other cultures and purposeful, appropriate behavior in diverse cultural contexts and fulfills the principle of intelligence that emphasizes the adaptability to a certain environment (Brislin et al., 2006; van Dyne et al., 2016). However, although mentioned personal characteristics provide a basis for CQ, a high willingness to learn as well as cultural metacognition are essential prerequisites for high CQ (Earley & Mosakowski, 2004). Metacognitive skills are primarily characterized by a high level of awareness of cultural differences as well as reflection of certain behavior patterns and situations (ibid.). According to Thomas et al. (2008) it is critical for the attainment of higher awareness to reflect situations and to provide education and active engagement with cultural diversity in the units. The identification of a problem is followed by the formulation of a strategy to solve the problem, the execution and long-term monitoring and evaluation of certain behavior (ibid.; Earley & Ang, 2003).

Earley and Peterson (2004) follow this approach, building on the metacognitive facet and considering the motivational and behavioral facet as elementary for CQ. Individuals would not only have to understand the attention and knowledge of intercultural environments, but also feel the motivation to use this knowledge. The authors take up thoughts of the social cognitive theory, according to which a high self-efficacy is necessary to have the understanding, by means of motivation, to perform certain behavior and to act culturally appropriate (Bandura, 2002). This indicates that cultural training can serve as a source of motivation for expat managers as well as local unit members to increase their own cultural receptivity (Shaffer & Miller, 2008). High self-efficacy in this context means the belief of personal capability to understand foreign cultures and to act appropriately and independently

(Bandura, 2002). The behavioral facet, as the last dimension, is strongly influenced by personal characteristics. Metacognitive skills, i.e. the attention and understanding of cultural contexts as well as the motivation to perform certain behavior are of no use if the behavior is not performed and no actions are taken. In the sense of Hofstede's and GLOBE's cultural dimensions, one's own cultural background can influence the way of behavior execution, allowing the identification of tendencies and potentials for high CQ (Earley & Mosakowski, 2004). In this context, CQ leaders possess the competence of all three facets, whereby cultural influences can tangentially affect the interaction of metacognition, motivation and behavior (Earley & Peterson, 2004; Earley & Ang, 2003).

The development of high CQ within the team but also at the management level is consequently an important prerequisite for the inclusion of multi-cultural teams, higher commitment and trust, higher willingness to share resources, and ultimately greater team and innovation performance (ibid.).

3.3.2. Dimensions of Inclusion

Bearman et al. (2017) address the difficulty of measuring inclusion in their research. As can be seen from the previous chapters, diversity can be approached with cognition and demographics from two dimensions. Human characteristics such as intelligence or personal experience are difficult to assess due to the strong dependence of context and complexity. However, Lubiano's (2019) framework defines eleven dimensions of inclusion, which are categorized into three tiers based on their relevance and occurrence (Table 2). The following definitions are adapted from Lubiano (2019) and have been paraphrased for the sake of the statement.

(1) New ideas are welcome

This dimension describes the openness of people to other cultures, mistakes and opinions and can be described from the organizational view as the firm's ability to adapt to change and people to fit their environment. Inclusive organizations not only have a high tolerance for possibly unorthodox approaches and opinions, but encourage people and teams to share them.

This form of participative safety (PS) is enhanced by multi-cultural interaction and is an essential component of an innovative environment (Winkler & Bouncken, 2011).

Tier 1	1 - New Ideas are Welcome
	2 - Culture of Trust
	3 - Leadership Engagement and Accountability
	4 - Feedback System
Tier 2	5 - Inclusive Language
	6 - Avoiding Groupthink
	7 - Well-defined Policies and Policy Enforcement
	8 - Conflict Resolution Plan
Tier 3	9 - High Recruitment Steady Retention
	10 - Sharing Power
	11 - Fellowship

Table 2. Eleven dimensions of inclusion (Based on: Lubiano, 2019).

(2) Culture of trust

A culture of trust is created by team members and managers being honest and acting with integrity, and by encouraging a positive working relationship. This in turn can lead to higher motivation and greater commitment to the team. Motivated and committed people tend to be more willing to share resources such as time, energy and effort and to help the team through intrinsic motives (Zahra & George, 2002). A strong culture of trust is therefore an inclusive dimension that can also be essential for the performance of innovation-oriented units.

(3) Leadership engagement and accountability

An inclusive workplace is further reflected in the commitment of managers and their adherence to the same standards as employees at all organizational levels. In addition, managers serve as mentors and provide a high level of employee orientation.

(4) Feedback system

New ideas must be allowed to be heard, understood and also criticized. This requires a feedback system, according to which dialogue as a direct but extremely effective communication system leads to a purposeful evaluation of ideas and approaches. Accordingly, a strong feedback culture is a key component of inclusion and, as an integral facet of the innovation process, of fundamental importance for the innovation performance of companies (Winkler & Bouncken, 2011).

(5) Inclusive language

An inclusive language is characterized by the fact that members communicate without using expressions that lead to an out-group understanding of other members and thus create an atmosphere of separate teams. Correspondingly, inclusive language has the potential to contribute to a sense of cohesion and unity of purpose, and to increase motivation within the team.

(6) Avoiding groupthink

The dimension of avoiding groupthink contradicts with several other dimensions, as a groupthink assessment at the same time opposes the development of a unified thought and an organizational culture. However, a high level of groupthink negatively impacts the ability of potentially new ideas and approaches to emerge or be heard, which is why minimizing groupthink simultaneously leads to well-balanced decision-making and an evaluation of all possible alternatives. The possible benefits of multi-cultural teams in the innovation process therefore depend on a spirit of differentiation, without discrimination or restriction.

(7) Well-defined policies and policy enforcement

The personal impression of team members that organizational policies are well-structured and applied further contributes to an inclusive workplace. According to Foss et al. (2012), high perceived procedural justice (PJ) is defined as perceived fairness of formal procedures regarding treatment and benefit of members and leads to less opportunistic behavior. Moreover, high perceived PJ has a motivating effect and increases team commitment (ibid.).

(8) Conflict resolution plan

Different views or cultural backgrounds invariably hold the risk of escalating into conflict. Conflicts can therefore end in counterproductive violence and destruction, but can also lead to new ideas and unorthodox practices. If the situation requires it, strong conflict management is consequently part of an inclusive workplace.

A capable system to control disagreements occurs more frequently in diverse environments and can increase the perceived participative safety of members (Bell & Pospisil, 2017). In addition, the safety of maintaining a strong conflict resolution plan can contribute to the development of social competencies such as CQ and welcoming mentalities. Specifically, all practices that reduce negative tensions from opposing views and methods for conflict mediation are considered aspects of conflict management.

(9) High recruitment steady retention

This dimension is characterized by the organizational motivation to show a welcoming environment for cultural diversity and to promote cultural diversity based on recruitment. Consequently, an inclusive workplace is defined by a high hiring rate and a stable employment rate in this regard.

(10) Sharing power

Sharing power defines the willingness of managers to distribute power and autonomy, contributing to a collective participation in decision-making. Flat hierarchies and perceptions of influence further increase participative safety and convey trust and the attribution of competence. Accordingly, the empowerment of individuals with culturally diverse contexts creates a greater sense of inclusion, increasing the likelihood of realizing their potential in terms of organizational contributions.

(11) Fellowship

Fellowship complements an inclusive workplace by providing a sense of belonging and identity. In addition to monetary incentives, it is intrinsic motives like these that lead to a higher commitment to the team and a higher willingness to share resources. As a result, fellowship can act as a driver for shorter adaptation periods and lower conflict intensity. Ultimately, an inclusive workplace becomes defined by the subjective sense of each individual to feel fervently included and to experience such participative safety.

3.4. Innovation Management

As early as Schumpeter, the view was expressed that new things can only emerge through the breakdown of old structures. Following the motto that heat is generated only through friction, the innovation process requires a creative destruction of resources and capabilities in order to sustainably establish new products, services or processes (Reinert & Reinert, 2006).

Furthermore, the innovation performance of a company can be defined as its ability to create knowledge and develop new innovations and, on the other hand, to implement these innovations in a targeted manner in the company, products or services (Seo et al., 2020.). Consequently, innovation performance depends on knowledge creation and knowledge integration. The following subchapters provide the reader with an understanding of different ways of knowledge creation as well as requirements for knowledge integration. The distinction between these two components is essential for the understanding of innovation

performance and is addressed again in the sense of the differentiation between operational and innovative units in this study.

3.4.1. Cluster & Innovation Systems

Cluster

According to Porter (1998, p. 78), clusters can be defined as "[...] geographic concentrations of interconnected organizations and institutions [...]" in an industry. This local concentration of linked actors can feature firms, research institutes, universities and public authorities and is understood as a highly complex network of resources, people and infrastructure representing a dynamic source of knowledge creation and innovation (Bittencourt et al., 2019).

For stakeholders, this density of industry-related network partners has positive and negative implications. Clusters thus offer participants in this network the opportunity to source, access information and technologies more productively and efficiently, and provide the necessary workforce (Porter, 1998). This streamlined access to specialized resources and simplified coordination and transaction across firms consequently leads to a rapid diffusion of best practices (Porter, 2008). However, the emergence of clusters is linked to a strong regional dependence on isolated industries (Asheim et al., 2011). Dedicated provision of infrastructure, economic development, or workforce training and skills development makes an adaptation-resistant monostructure potentially vulnerable to structural or cyclical crises (Bittencourt et al., 2019; Prim et al., 2016). Negative examples such as Detroit in the USA or the Ruhr region in Germany have shown how entire regions can collapse in terms of loss of jobs and prosperity, resulting in long-term economic consequences.

Technology clusters such as the silicon valley or emerging locations such as Tel Aviv, Israel are known for their high innovation capability. Studies show that it is not the location itself, but rather the networks of highly complementary participants that ensure learning, collaboration and thus the transfer of tacit knowledge leading to the creation of innovations (Porter, 2008). In addition, strong competition arises, which creates pressure to innovate and allows companies to become more agile (Porter, 1998). Crucial to the innovation capability of clusters is the interaction of separate players to gain a competitive advantage through the

unique combination of resources (Bittencourt et al., 2019). The resource-based view discussed in section 3.2.6 is therefore an essential legitimator for the innovation capability, the development and the continued existence of clusters. In this context, the success of such agglomerations depends significantly on the absorption capacity (ACAP), which will be discussed in detail in the next chapter (Cohen & Levinthal, 1990).

For the German automotive industry, this means that German automotive clusters benefit from high organizational heterogeneity and that the specific combination of local knowledge bases and resources leads to competitive advantages over global competitors. Referring to the local workforce being a crucial resource factor, the highly needed heterogeneity of organizational actors could consequently lead to the assumption that a culturally heterogeneous workforce can also contribute significantly to the innovation capability of the German automotive industry.

The legitimacy of German R&D initiatives related to local networks refers to the origins of automotive engineering as an engineering-intensive and, according to Asheim and Coenen (2005), synthetic knowledge base. Trends such as connectivity, autonomous driving through AI as well as other ICT-related technologies challenge German automotive companies to seek innovations outside local clusters and to establish global innovation networks of analytic relationships (Prim et al., 2016).

Innovation Systems

Innovation systems differ from clusters in that they consider the development of innovations as the primary focus, whereas the nature of clusters is primarily a network of related organizations and institutions and brings innovation as a direct consequence (Asheim & Coenen, 2005). Furthermore, while innovation systems can be regionally focused, this is not a necessity. In this context, innovation systems consist of very heterogeneous participants, similar to industry clusters (Corsaro et al., 2012). The triple helix model (Figure 3) emphasizes the highly connected interaction between different actors of industries and business networks such as companies, customer and technology centers, but also research institutes and institutions that define the legal framework of innovation systems and are

mostly state-owned (Etzkowitz & Leydesdorff, 2000). For the actors involved, innovation systems consequently lead to better access to external resources as well as extended knowledge bases, which can expand and positively influence the development of the firm's core competencies (Corsaro et al., 2012).

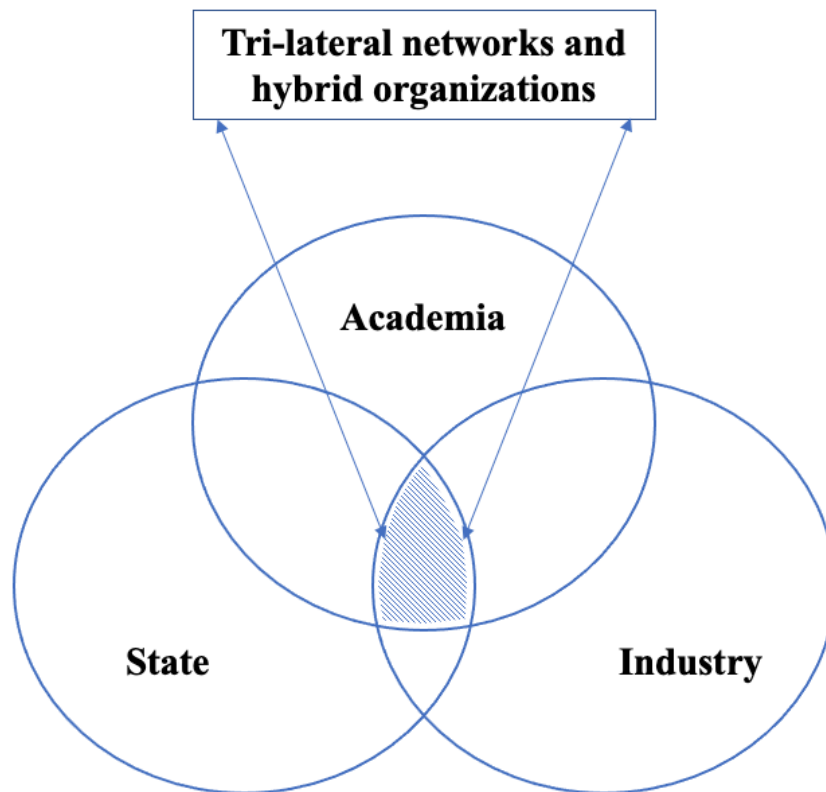


Figure 3. The Triple Helix Model of University-Industry-Government Relations (Etzkowitz & Leydesdorff, 2000, p. 111).

A differentiation is made between global innovation systems (GIS), national innovation systems (NIS) and regional innovation systems (RIS). Global innovation systems can be defined as a globally organized web of collaborative interactions between different organizations that have dedicated their actions in these networks to knowledge creation and consequently to the development of innovations (Barnard & Chaminade, 2011). The distinction between synthetic and analytical regional clusters according to Asheim and Coenen (2005) implies a variance in the nature of knowledge bases. As technologies become

more sophisticated, knowledge becomes highly sticky and difficult to transfer. As a result, specific knowledge bases are developing across the globe, which are becoming increasingly important for automotive OEMs. OEMs in the German automotive industry have a globally oriented strategy and possess large capacities for global activities. Furthermore, based on further cross-border interactions regarding production and sales, these companies are experienced within the international context and possess essential organizational abilities to be successful in GISs. These internal factors of German automotive manufacturers and suppliers therefore make a globalization of innovation feasible.

External factors are determined by industry-specific aspects as well as national and regional innovation systems (Asheim et al., 2011). National innovation systems are mainly characterized by a governmental innovation policy, which enables R&D funds, investments in education and research institutes as well as economic stimulation to attract innovation (Chaminade et al., 2018). In this context, companies are related to the government and other national actors of industry, science and financial organizations and are supervised by institutions, i.e. the legal framework according to laws and norms (ibid.).

Regional innovation systems are mainly characterized by regional networks and external factors that influence a company and its innovation activities (Asheim & Coenen, 2005). Again, it is the interplay of institutional frameworks, the provision of capital by participating financial organizations, and producing organizations such as OEMs and suppliers that generate innovation through collaboration (Chung, 2002). More concretely, companies in RIS experience the application of regional innovation policy tools such as business incubators or science parks, which support local networks and stimulate innovation (Asheim & Gertler, 2005). Consequently, knowledge creation in RIS takes place even more on the basis of personal relationships, increasing the degree of tacit knowledge and making knowledge creation on RIS often sticky and less easy to transfer (Martin et al., 2018; Asheim et al., 2019). As outlined earlier, the development of RIS depends on its degree of absorptive capacity. Absorptive capacity can be understood as the ability to recognize the value of new, external information, as well as the skill to assimilate and adapt this information in a new context (Bittencourt, 2019). However, according to Martin et al. (2018), RIS are not equally developed by any means. Thus, RIS are primarily differentiated by their organizational thickness as well as their specificity (ibid.). With global innovation initiatives and

collaborations in highly specified and organizationally thick clusters and RIS such as silicon valley, Tel Aviv or Asian regions, German automotive manufacturers have the opportunity to draw from a pool of local knowledge and attract relevant skills in addition to the advantages of increased local responsiveness (ibid.).

Although the need for ICT knowledge creation is also addressed and diffused in German automotive clusters, the high dynamics and specificity of certain technologies requires the development of global networks of collaboration partners, globally dispersed R&D centers for greater local responsiveness as well as great ability to integrate this accumulated knowledge. This process of integration can be defined as knowledge management (KM) and characterizes the content of the following chapter (Minbaeva et al., 2003).

3.4.2. Knowledge Management

As an essential part of intellectual capital, knowledge management is considered an important capability of MNCs. The way in which knowledge is created and leveraged into value is particularly relevant for globally operating companies, which must transfer and distribute normative values, corporate culture and product-oriented knowledge (Mårtensson, 2000). Increasing complexity and strong competitors in the global context of MNCs consequently demand ever more efficient knowledge management (Awad, 2007).

According to Greiner et al. (2007, p. 4), KM "[...] includes all activities that utilize knowledge to accomplish the organizational objectives in order to face the environmental challenges and stay competitive in the market place". Consequently, great KM enables firms to be faster, more agile and more efficient in external and internal interactions. In this context, knowledge emerges from the processing of information of a person and is highly context-specific (ibid.). The premise of information processing therefore implies that knowledge can only exist in the context of individuals. This leads to the assumption that knowledge depends on the way individuals perceive, interpret and process information. As discussed in the previous chapters, culture is an interdependent mechanism in which individuals are influenced context-specifically, but equally influence culture with their own experiences. This leads to the assumption that culture influences the way people process information and that

diverse people with different experiences, values and interpretations in different contexts lead to a more diverse knowledge base. However, knowledge becomes valuable to an organization the moment it is transformed into concrete actions, processes or products (Nickols, 2000). The value of knowledge and knowledge management therefore depends on the ability to integrate knowledge.

In this context, the concept of knowledge has to be separated. Tacit knowledge represents person and context specific knowledge, which is bound and therefore difficult to communicate (Awad, 2007). A distribution of the entire knowledge of a person is not possible, which is why an imitation of tacit knowledge of a cultural diverse workforce in the sense of the resource-based view is equally not realistic. Explicit knowledge, on the other hand, can be codified and disseminated as data (Nickols, 2000). However, it is crucial that explicit knowledge is based on tacit knowledge and is created through the externalization of tacit knowledge (Greiner et al., 2007). Consequently, the strategy of how knowledge is distributed internally depends on what kind of knowledge is at stake. The codification strategy, characterized by primary sharing of data, is appropriate especially in codable knowledge contexts. However, due to the importance of tacit knowledge, companies in innovation-intensive contexts rely on the personalization strategy, which is mainly focused on direct communication (ibid.). This leads to the assumption that cultural diversity through greater bases of tacit knowledge leads to a better precondition for innovation, but in terms of the personalization strategy there are also challenges to manage due to differences in beliefs, ways of working, and language and coordination barriers. Accordingly, it is primarily tacit knowledge that is constantly evolving alongside cultural diversity (Earley & Peterson, 2004). Few industries are more innovation-intensive in the current phase than the automotive industry (Di Bitonto, 2020). This confirms the importance of cultural diversity as a driver for knowledge creation and inclusion as a driver for knowledge integration.

Absorptive Capacity

As already outlined in the context of clusters and regional innovation systems, absorptive capacity refers to the ability to identify, incorporate and exploit external value in the sense of corporate objectives through appropriate application (Nowak, 2020). This type of capacity

applies not only to the context of regional networks but also to organizational units. It is therefore not an individual characteristic, but a group-level capability that can vary in degree and potential impact within a company (Cohen & Levinthal, 1990). Organizational units with high ACAP are characterized by their ability to manage the transfer of tacit knowledge in innovation-intensive contexts and their ability to combine learning capabilities and problem-solving (Zahra & George, 2002).

Zahra and George (2002) take up the original conception of Cohen and Levinthal (1990) and expand the concept of absorptive capacity in the distinction between potential absorptive capacity (PACAP) and realized absorptive capacity (RACAP).

Accordingly, PACAP contributes to the company being receptive to the acquisition and assimilation of external knowledge (ibid.). PACAP is correspondingly characterized by the regulation of external knowledge and ideas generated in the market (Nowak, 2020). Acquisition is described as the ability to acquire externally generated information (e.g. from external partners such as startups) (Nowak, 2020). This dimension determines the frequency as well as the intensity and direction of external knowledge sourcing (Zahra & George, 2002). Assimilation constitutes the second dimension of PACAP and refers to the interpretation and comprehension of newly acquired information (Nowak, 2020). The way a company assimilates knowledge determines which external information is considered valuable and subsequently used for innovation activities (ibid.).

Cohen and Levinthal (1990) similarly underpin the value of knowledge acquisition, but presuppose the exploitation of the same in their model. In this context, Zahra and George (2002, p. 190) complement that it is RACAP that must be used as a "[...] function of the transformation and exploitation[...]" of external knowledge. RACAP therefore aims to incorporate new information and select internal applications that can lead to process implementation (Nowak, 2020). Transformation can therefore be seen as capability to develop processes that combine existing knowledge with new knowledge generated from acquisition and assimilation (ibid.). Exploitation represents the second dimension of RACAP and describes the establishment of routines that leverage existing knowledge or new combinations of transformed knowledge (Zahra & George, 2002). Here, procedural mechanisms and fixed structures in particular ensure the sustainable exploitation of

knowledge in the long term and, according to figure 4, lead to innovation performance and consequently to competitive advantages (ibid.; Nowak, 2020; Jansen et al., 2005).

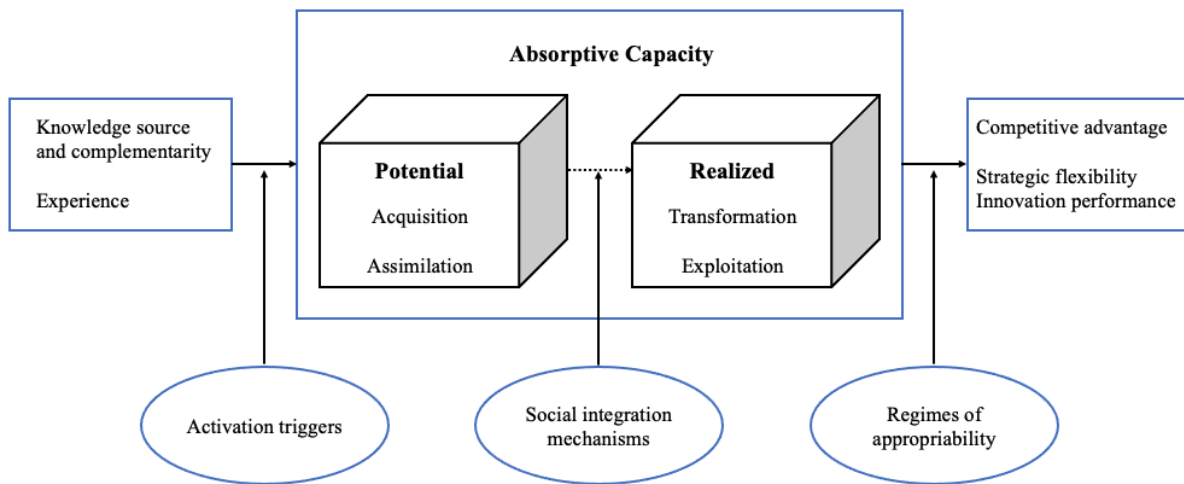


Figure 4. A Model of ACAP (Zahra & George, 2002, p. 192)

3.5. Theoretical Framework

The following chapter follows the intention to provide a further theoretical basis for the analysis of the study and the development of a conceptual model. Selected empirical results from secondary literature are discussed and placed in the context of relevant questions of this thesis.

Cognitive Diversity

As discussed at the beginning of Chapter 3, the impact of cultural diversity on organizational outcomes can be positive and negative depending on the context. Cognitive diversity, the similarity-attraction paradigm, social cognitive theory and social identity theory represent a primarily cognitive-psychological approach, while the resource-based view shows a more organizational view of cultural diversity as a resource for sustainable competitive advantages.

Miller et al. (1998), regarding the relationship between cognitive diversity and organizational performance, state that a wider range of employee backgrounds leads to more learning opportunities. Opposing views lead to a diverse approach to problem-solving and consequently increase the potential choice of actions and ideas (ibid.; Mitchell et al., 2017). Mitchell et al. (2009) corroborate these findings with their research that organizational openness to CGD leads members to engage in debate behavior, which facilitates knowledge creation. Units with high awareness and value in cultural differences are more likely to leverage these knowledge resources, allowing teams to affect the level of inclusion through their own attitudes toward cultural diversity (ibid.). Furthermore, the authors find that high cognitive diversity, which is significantly influenced by cultural influences, negatively affects cohesion. Cohesion can be defined as the extent of members affiliation and commitment to a units collectively pursued objectives (Nowak, 2020). Individuals who have similar values and beliefs feel more connected, which leads to higher participative safety. With regard to the innovation process, according to Winkler and Bouncken (2011), a high level of participative safety is essential, especially at the beginning of the innovation process when it comes to the expression of ideas and divergent approaches. Consequently, needs for high cohesiveness conflict with needs for diverse knowledge bases in the innovation process.

Miller et al. (1998) further find that ideas generated in cohesive teams pass through group thinking unchallenged and that high CGD opposes this effect resulting in a greater understanding of colleagues reasoning through discussion. This leads to the assumption that the management of diverse units and inclusion measures have a greater potential impact on innovation in culturally diverse units. Furthermore, it can be assumed that culturally diverse groups with strongly opposing views will have negative effects on organizational outcomes without management due to slower processing, as well as higher conflicts and barriers. However, Reynolds and Lewis (2017) find that diverse teams without inclusion measures and cultural diversity management achieve higher team performance through cognitive adaptation processes over time. This dependence on the time of collaboration in the context of highly dynamic markets of MNCs with great innovation and competitive pressures, nevertheless, outlines a scenario that companies in the German automotive industry should avoid. (Watson et al., 1993). Proactively addressing cultural diversity management and inclusion consequently has the potential to reduce the adaptation time of culturally diverse units as well as associated costs.

Absorptive Capacity

Cognitive diversity influences collective information processing and affects the way units address organizational problems or innovation activities (Nowak, 2020). The distinction between PACAP and RACAP from chapter 3.4.2. already implies that certain characteristics are needed for the acquisition and assimilation of knowledge and others for the transformation and exploitation of knowledge. Nowak (2020) finds that CGD is positively related to PACAP. As figure 5a shows, high CGD leads to a higher level of assimilation of knowledge in the case of low acquisition but also high acquisition. As a positive variable of CGD, a higher degree of CD thus affects the acquisition of knowledge and leads to a higher potential absorptive capacity of units. In short, cultural diversity provides potentially integrable knowledge through expanded knowledge bases and facilitates the conditions for the exploitation and combination of existing and new knowledge.

Furthermore, Nowak (2020) finds that in the context of RACAP a high degree of cohesiveness has a positive effect. Figure 5b shows that higher affiliation and commitment to

units leads to a more efficient transformation of knowledge and consequently to higher RACAP.

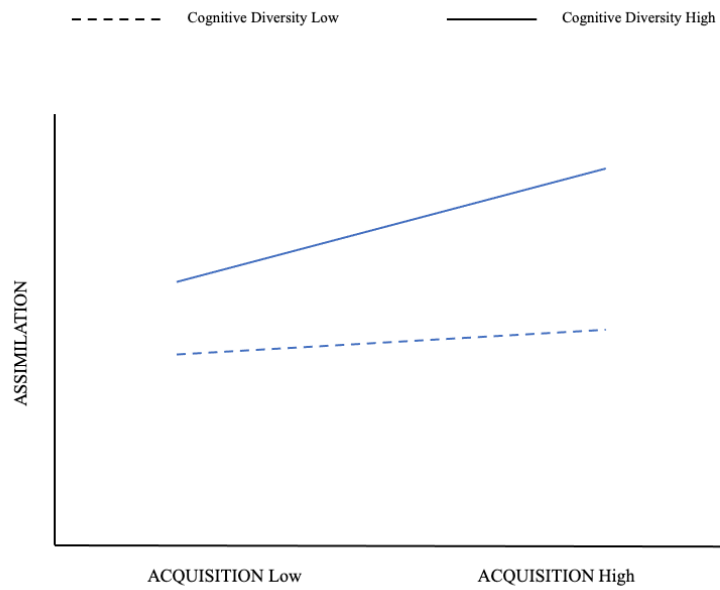


Figure 5a. The interactive effect of acquisition and cognitive diversity (Nowak, 2020, p. 19)

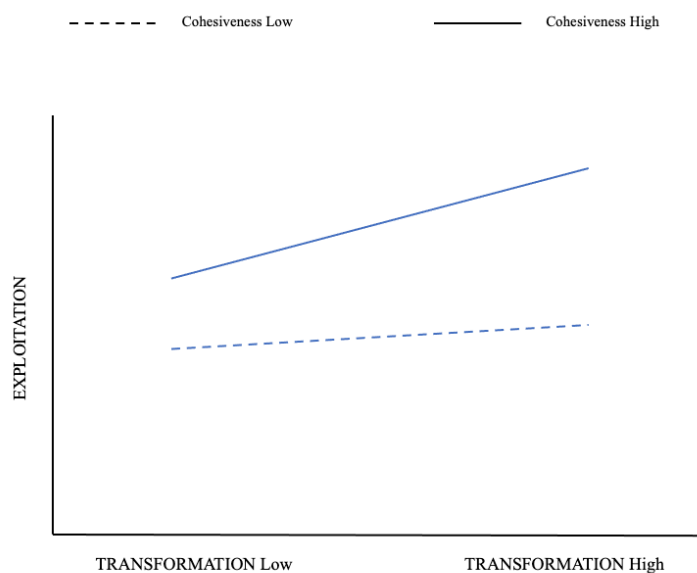


Figure 5b. The interactive effect of transformation and cohesiveness (Nowak, 2020, p. 20)

This relationship between CGD and PACAP as well as cohesiveness and RACAP implies that a similar distribution of effects is to be expected when distinguishing between operational and innovative units. Innovative teams in the automotive industry such as R&D units, innovation labs or internal business incubators have the priority of knowledge creation. Based on the findings, it can be assumed that cultural diversity has more positive outcomes in innovative units than in operational units, in which the exploitation of knowledge is the objective. Knowledge exploitation requires the willingness to share resources (Zahra & George, 2002). According to the literature, this willingness is higher in homogeneous units. Social identity theory and social cognitive theory explain that homogeneous units have lower barriers to knowledge flows than heterogeneous units. However, according to Zahra and George (2002), social integration mechanisms such as cultural training, CQ and inclusion can induce knowledge sharing (cf. figure 4). Therefore, those social integration measures reduce the gap between PACAP and RACAP and increase the efficiency of assimilation and transformation capabilities of the company (ibid.). Based on this theoretical foundation, inclusion can therefore contribute to the realization and integration of broad knowledge bases of culturally diverse innovation units to a greater extent.

Furthermore, Chow's (2018) findings of inclusion as a mediator between cognitive diversity and team creativity as well as firm performance confirm the connection between inclusive climates and higher team performance.

As outlined above, the willingness to share resources and knowledge is essential for RACAP. Minbaeva et al. (2003) find that ACAP partly depends on employee's ability and employee's motivation. This implies that the development of cultural intelligence as well as cultural training can increase employee's (cultural) ability. In addition, inclusive dimensions such as high levels of participative safety through a strong trust base and feedback systems have the potential to sustainably increase employee motivation. Foss et al. (2012) find that high levels of procedural justice, i.e. the perceived fairness of formal procedures regarding the treatment and benefits of actors in the firm, has a positive effect on employee motivation. Well-defined policies and policy enforcement constitutes one of the 11 dimensions of inclusion already addressed, which leads to the assumption that high levels of procedural justice can also positively influence ACAP through greater employee motivation according to Minbaeva et al (2003). Similarly, Gupta and Govindarajan (2000) provide support in their findings that

inclusion measures can lead to higher knowledge flows between units by improving ability and motivation and therefore ACAP.

Innovation Process

Winkler and Bouncken (2011) study the influence of the cultural dimensions context, time and power distance on the performance of global innovation teams. Under natural circumstances, they characterize cultural diversity as a limiting factor of innovativeness due to low group cohesion as well as coordination issues, discrimination and social categorization (ibid.). Although they acknowledge that diverse cultural backgrounds lead to more creativity and better access to knowledge, they also emphasize the importance of inclusion as essential in the innovation process (ibid.). Accordingly, a high level of participative safety is necessary, especially in the early phases of the innovation process, the recognition and initiation phase (Cooper, 2008). This coincides with the inclusive dimension 'new ideas are welcome', according to which every team member can freely express ideas and opposing views, and is listened to. This leads to the assumption that inclusive measures are particularly valuable at the beginning of the innovation process. Winkler and Bouncken (2011) further find that the medium-level diversity dimensions of context and time, i.e. in the directness of communication as well as accuracy in time dimensions such as punctuality and adherence to deadlines, have a negative impact on the innovation process at the beginning. However, this effect decreases over time and is even transformed into positive influences after a team-internal adaptation and habituation, whereby inclusion can accelerate this process (ibid.). Furthermore, this process implies a certain dynamic of culture and team-internal learning procedures with regard to sensitivity and cultural awareness. As discussed at the beginning of this paper, there are approaches that view culture as static and homogeneous, while others define culture as heterogeneous, dynamic and highly adaptive in parts. The authors find a consistently negative influence with regard to power distance, which decreases over time but remains negative. This leads to the assumption that certain deep-level diversity dimensions are less flexible and adaptable than others. This would be consistent with the definition of culture according to the onion model, in which key core beliefs and cultural characteristics are very static and do not change in new environments. Other dimensions that appear further

out, on the other hand, can be influenced, which can consequently be referred to as cultural blending. This distinction in cultural dimensions also leads to the assumption that not all dimensions can be influenced to the same extent by inclusive measures. Consequently, high diversity levels in static dimensions such as power distance should be avoided, since little change would be achieved by even cost-intensive inclusion interventions. On the basis of these results, inclusion is particularly important in the early phases of the innovation process, since good ideas and projects might be destroyed due to communication and a lack of PS because they have not yet been adapted.

Cost-Benefit Tradeoff

Higher cultural diversity is accompanied by greater complexity in processes, coordination and communication. Seo et al. (2020) find an inverted u-shape relationship between geographic diversity and innovation performance (figure 6). The authors argue that the complexity of increasing cross-border interactions imposes costs that reduce the benefits of resulting innovation performance (ibid.). Consequently, a cost-benefit tradeoff can be identified, according to which a maximum innovation performance of the company is shown at a moderate level of geographic diversity. However, the findings also show that innovation performance can significantly depend on the extent of collaboration and team composition. The u-shaped relationship further emphasizes that a combination of knowledge creation and knowledge integration is most effective for the innovation performance of MNCs (ibid.).

Geographic diversity is substantially influenced by the implications of cultural diversity. Consequently, these findings lead to the assumption that costs associated with the internal coordination of cultural diversity as well as the establishment of CQ and an inclusive workplace contrast with the benefits realized through knowledge creation and innovation. Based on this, it can be further assumed that culturally homogeneous units cause less costs, but also result in less knowledge creation due to lower knowledge bases. The distinction between operational and innovative units further implies that due to the necessity of a broad knowledge base, the need for cultural diversity in innovation-oriented units is greater than in operational units. It can be assumed that culturally homogeneous units have less need for inclusive measures due to fewer opposing views, beliefs and work methods, and that

innovative units have a greater capacity for inclusion due to ideally greater cultural diversity. This relationship will be analyzed in the context of this study.

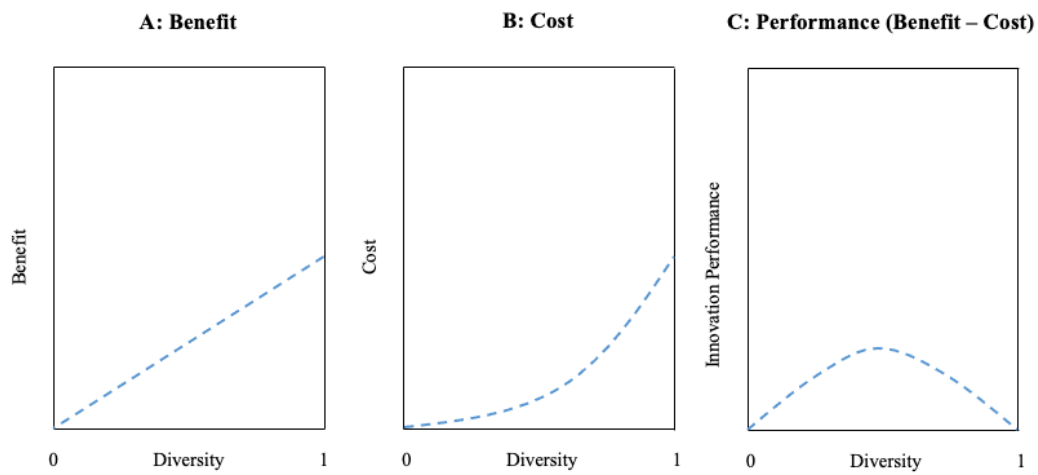


Figure 6. Inverted U-shaped relationship between geographic diversity and innovation performance (Seo et al. 2020, p. 859)

4. Methodology and Data Collection

In the following chapter, the author provides an overview of the chosen methodology, the reasons and rationale for its selection, and the approach to data collection and data analysis processes. This section is intended to ensure greater transparency and to provide an understanding of the validity of the following results and analyses.

4.1. Methodology

This thesis aims to generate new insights and contributions regarding the influence of inclusion on the relationship between cultural diversity and innovation performance of relevant organizations in the German automotive industry. Based on the theoretical framework and literature review, a research gap was identified regarding the determinants of unit orientation and team composition. For this question, it is crucial to obtain an understanding of social processes and individual perceptions. According to Bell and Bryman et al. (2015: 356), this ontological position is where "[...] social properties are outcomes of interaction among people" and consequently difficult to quantify.

For this reason, semi-structured interviews were used as methodology in the course of qualitative research (QR). Cultural diversity and inclusion can be perceived as subjective understandings and views of real phenomena that require reflection and attention. Own experiences and opinions can be formulated more easily in an interview and offer the researcher the possibility to interact more intensively with the participants (Doz, 2011). In this context, QR is essential for surfacing contextual dimensions that are abstract, in need of explanation, and often only accessible at second glance (ibid.). In addition, QR accesses information based on experiences and stories that are hard to quantify and offers the possibility to contribute new ideas and approaches for the researcher (ibid.; Piekkari & Welch, 2006). Consequently, QR is better suited for the purpose of adding the dimension of unit orientation and inclusion to existing theoretical framework in the context of cultural diversity.

On the other hand, legitimate shortcomings such as a more time-consuming and potentially more cost-intensive elaboration of the results as well as increased demands on the respondents have to be considered in terms of qualitative research (Röbken & Wetzel, 2017). In addition, qualitative studies are often accused of limited comparability and generalizability. For the purpose of this study, the issue of generalizability was addressed by forming homogeneous classes according to unit orientation and team composition in the sense of categorical generalization, which abstracts concrete statements into general formulations in terms of these classes and legitimizes applicability to new specific settings (Mayring, 2007).

The decision for a comparative case study is based on the intention to create added value for academia, but also for corporate management practice. The subject of this study is difficult to address from outside the box and requires more in-depth questioning due to the importance of subjective perceptions of social processes and relationships.

4.2. Data Collection

4.2.1. Data Sampling

The data drawn on for the analysis is based on primary data through ten semi-structured interviews of corporate experts from the German automotive industry on the one hand and on secondary data through an extensive literature review on the other. The participants were selected in a purposive sampling approach in a strategic way based on their organizational function, with their corresponding organizational units matching the researcher's intentions.

In total, ten participants from six companies were interviewed, all of them being corporate experts in the industry. Two of the ten participants can be defined as corporate elite, each reporting directly to their company's board of management in their function. Six participants can be classified as middle management, while two respondents can be classified as entry-level professionals. With 10 interviews, there is a sufficient basis to consider different units from different companies. In-depth interviews of corporate elites are primarily compelling for the quality of their insights and statements, which is why this form of research is an appropriate sample size for this thesis (Mayring, 2007).

The selection of participants follows the intention to interview leading managers and middle managers equally and to identify possible differences in their perceptions regarding cultural diversity management and inclusion. Middle managers engage in a two-pronged relationship, having leadership responsibilities but also their own supervisor. Consequently, they view the issue from two perspectives. In addition, the selection offers a good mix of operational and innovative units. The latter were selected on the basis of their contacts with startups and collaborating partners, among other things, in order to establish a link to innovation pressures in the industry.

4.2.2. Interview Process

The benefit of semi-structured interviews is to receive a greater understanding and better descriptions of perspectives and experiences (Bell & Bryman, 2015). In this context, an interview guide was created that was initially identical for each participant. However, the format of semi-structured interviewing consistently allowed for follow-up questions and responses to what participants were saying. In this way, specific issues could be elaborated and deepened further. Interviews of this type promote the degree of contribution on the part of the interviewees and lead to rich, thick data, which is necessary for a purposeful analysis (Röbken & Wetzel, 2017).

For better access to corporate elites, it was decided to arrange the interviews via the online video platforms Zoom and Microsoft Teams. At the time of the survey, the interviewees were distributed in Germany, and partly in Europe; conducting the interviews on-site would hardly have been possible within the scope of this thesis with the same sample size. Access to high-ranking managers would have been difficult under similar conditions. In addition, the time flexibility of this method led to a higher acceptance of participating as an interview partner. The respondents were appreciative of the convenience and schedule flexibility and showed a high level of motivation to attend the interview throughout. Furthermore, this method ensured that participants were not distracted or influenced by other contextual factors. The interviews were conducted within a 4-week period (April 07, 2022-May 05, 2022) and lasted between 26 and 57 minutes with an average duration of 40 minutes and 36 seconds. For better comparability, the interviews were all conducted in the morning during business hours.

In addition, the interviews were held entirely in the participants' native language. Especially in QR, words are essential (Piekkari & Welch, 2006). Consequently, the decision of language was based on the consideration of providing the participant with a harmonious and familiar environment in which thoughts and statements should not depend on potential language barriers. The free expression of subjective perceptions is the main priority for this study. Ultimately, this has positive implications for the accuracy and authenticity of the data. Based on these considerations, nine interviews were conducted in German and one interview was conducted in English.

All participants were informed of the public domain of the study at the time of contact. Subsequently, seven of the ten participants preferred to remain anonymous, which is why attention was paid during the interview process not to verbalize personal characteristics. At the beginning of the interviews, the interviewer presented the purpose of the research to the participants without revealing the content of the questions or further details. According to Doz (2011), this creates a basis of trust and promotes understanding on the part of the participants. Furthermore, emphasis was placed on asking open-ended questions in order to lead the participant into a flow of speech. Based on the interview guide, each interview was divided into the following parts: (1) demographic background, (2) working environment, (3) cultural diversity, and (4) inclusion. All definitions were explained for better understanding and reduction of errors by the researcher.

4.2.3. Assessment of Research Quality

Qualitative research is always considered to lack comparability of results, especially in comparison to quantitative methods (Mayring, 2007). With regard to the highly context-dependent statements of the test persons, a universal assertion and generalizability is indeed difficult. However, it must be questioned which intention the researcher pursues with his/her study — observing, identifying or measuring (Bell & Bryman, 2015). To analyze and utilize clear numbers in the form of measurement, qualitative data is insufficient, but for the purpose of this thesis, the identification of cultural diversity and inclusion in operational and innovative units of relevant firms, QR is meaningful. Through a thick description of social settings in comparable contexts, a database is created in the course of this study, which allows

a transferability to similar contexts. This form of validity is further achieved by triangulation, combining and integrating previous studies and drawing on multiple sources of data and empirical literature (Mayring, 2007).

Consistent agreement between the participants' statements and the literature further provides a certain level of reliability. In addition, a full transcription of the interviews allows for a detailed analysis and further increases reliability.

4.2.4. Potential Bias and Susceptibility to Errors

This study was conducted by the researcher in all conscience and with the highest possible degree of transparency and comparability. The aim was therefore to perform the interviews with the lowest possible susceptibility to bias and the greatest possible objectivity.

Nevertheless, the open-ended nature of semi-structured interviews can lead to various forms of bias. In the course of the interview, leading questions may be asked from time to time, which can influence the responses. The degree of this variance is difficult to measure and can lead to a loss of validity based on how much the interview guide was deviated from (Piekkari & Welch, 2006). In addition, a situation may arise in which participants prefer to give the answers that they think will help the most and are most relevant to the topic (ibid.). In this study, this risk was mitigated in that little information about the topic of the work was revealed to the participant and no information at all concerning the research question. A deliberately incorrect answer would have been highly speculative. In addition, participants were repeatedly advised at the beginning and also during the interviews that truthful and detailed answers were essential to the credibility and quality of the study. All participants gave the impression of following this imperative. With regard to possible anonymization, there was a broad willingness to answer openly and honestly and also to address sensitive issues of cultural diversity and possible positive as well as negative aspects.

Furthermore, the nature of semi-structured interviews has the susceptibility of errors in the interpretation of the answers. Questions can also be misunderstood on the part of respondents, which in turn leads to incorrect or at least off-target responses (Doz, 2011). This vulnerability to error was reduced by consistently asking follow-up questions in case of

ambiguity and by having the researcher clearly read out definitions multiple times if necessary. Furthermore, errors can occur due to poor audio quality of online video platforms or poor audio recording. However, this was not the case in any of the interview situations. The transcriptions of all interviews were done in detail and with the necessary time.

Due to the fact that nine of the ten interviews were conducted in German, the native language of the interviewer and interviewee, and only one interview was conducted in English, the risk of language bias was greatly reduced. PM Red (2), as a Canadian citizen, wished to conduct the interview in English, his native language. There was no difficulty in doing so, and it must be emphasized that under no circumstances did he take advantage of his linguistic superiority to create an imbalance in the interview. A single time the definition of the technical term "procedural justice" was misunderstood. However, after detailed and repeated explanation, this incident can be considered as not influencing the quality of his following answer.

4.3. Data Analysis

With the consent of all respondents, the interviews were recorded as audio files and saved for the purpose of subsequent transcription. The complete transcription of the interviews offers the advantage of being able to analyze and interpret what has already been said in more detail and thus contributes positively to the research quality of this study. Furthermore, transcription provides the opportunity to integrate direct quotes into the analysis, leading to greater transparency on the one hand, and better understanding, readability, and attribution of statements on the part of the reader on the other (Bell & Bryman, 2015).

In the further course of the analysis, the responses of the participants were classified according to key words with regard to the main topics of this study and transferred into charts. Findings with high relevance for the development of the following conceptual model are integrated in the analysis in the following chapter and partly referred to with direct speech in the continuous text. For maximum transparency, all relevant quotations are also categorized and classified in charts (cf. appendix). For this purpose, relevant text passages in the transcripts were translated from German into English where necessary.

	Identification	Gender	Age	Nationality	Employer	Education	Role	Unit Orientation
1	<i>PM Red (1)*</i>	Male	36-40 years	German	<i>Red</i>	Graduate Engineer Automotive	Project Management	Operational
2	<i>IT Consultant Gold*</i>	Male	27 years	German/Turkish	<i>Gold</i>	Graduate Engineer Mechanics	Software Development & IT Consultancy	Innovative
3	<i>PM Red (2)</i>	Male	52 years	Canadian	<i>Red</i>	Graduate MBA	Project Management	Operational
4	<i>Salesperson Red*</i>	Female	36-40 years	German	<i>Red</i>	Trainee Industrial Clerk	Sales	Operational
5	<i>Engineer Silver*</i>	Male	30 years	German	<i>Silver</i>	PhD Student Engineering Automotive Aerodynamics	Automotive Development Aerodynamics	Innovative
6	<i>Head of PM Red*</i>	Male	36-40 years	German	<i>Red</i>	Graduate Engineer Automotive	Head of Project Management Drives	Operational
7	<i>IM Blue*</i>	Male	26-30 years	German/Greek	<i>Blue</i>	Graduate B.Sc. Business Administration	Innovation and Startup Management	Innovative
8	<i>Product Manager Silver*</i>	Female	26-30 years	German	<i>Silver</i>	Graduate MBA	Product Management	Operational
9	<i>HoR Black*</i>	Male	46-50 years	German	<i>Black</i>	Graduate Engineer Automotive	Team Principal Racing	Innovative
10	<i>IM Green*</i>	Male	26-30 years	German	<i>Green</i>	Graduate B.Sc. Technology Management	Head of Business Accelerator	Innovative

Table 3. Participants in the study.

* The quotations of these participants were translated from German into English.

Person-relevant characteristics were decoded unless necessary for the purpose of the study. In addition, names and employers of the participants were anonymized and converted to pseudonyms in the sense of table 3. This is another measure that significantly increased the willingness to participate, but in no way affected the results of the study. A pseudonymization protocol was created for personal use in order to analyze characteristics and associated statements more clearly. The naming of the participants was based on their occupation as well as their employer named as a pseudonym (e.g. PM Red or HoR Black). Although three of the respondents agreed to be named, ultimately all participants were anonymized equally for the sake of uniformity in this study.

Table 3 provides an overview of the participants, each in the context of the information relevant to this study. A classification was made according to gender, age, nationality, employer, education, current role in their company as well as by unit orientation (operational vs. innovative), with the classification being derived entirely from the participants' responses. The introduction to the participants is presented in more detail at the beginning of the following section.

Furthermore, for the analysis of reported cultural differences, several databases regarding the cultural dimensions according to Hofstede and GLOBE were accessed.

5. Results and Analysis

5.1. Data Introduction

PM Red (1)

PM Red (1) is 39 years old, male and has completed a degree in mechanical engineering by consistently working his way up through the intermediate school certificate and the technical baccalaureate. Originating from the region of his employer, red is his first and so far only company he has worked for. Red is one of the largest German car manufacturers and classifies itself explicitly in the premium segment.

His current role can be defined as project coordinator for overall vehicle projects. He himself defines his task as ensuring "[...] that everyone does what they are supposed to do".

IT Consultant Gold

IT Consultant Gold is 27 years old, male and was born near Hamburg as the son of Turkish immigrants. He completed his secondary schooling, his secondary academic studies, his bachelor's degree in industrial engineering, and his master's degree in mechanical engineering. As the son of third-generation guest workers, he now finds himself in a very contrasting social milieu with great differences in terms of standard of living and the adoption of seemingly self-evident things in everyday life.

As an IT consultant for Gold, which as an "[...] IT service provider develops software and offers IT consulting and other IT services", the participant currently has "[...] the role of a product owner". He and his team are "[...] developing a configuration app for a well-known automobile manufacturer in southern Germany", where the interviewee's responsibility is to "[...] support the product owner of the automobile manufacturer by iteratively increasing the value of the product, i.e. from sprint to sprint". Consequently, IT Consultant Gold does not work directly for an automotive manufacturer, but contributes to the automotive organization as an external specialist and supplier of software solutions.

PM Red (2)

PM Red (2) is 52 years old, male and originally from Canada. With a completed MBA, he came to Germany in 1999 to take on various roles for his current employer Red. As a project manager of multiple vehicle projects, he primarily takes on a „[...] coordination role" without having „[...] the disciplinary responsibility". Instead, he has the responsibility "[...] to coordinate activities [of different departments] and to ensure that the jobs are done in timely fashion". He further defines his role as a project manager as follows: "As a project manager you have to stand there in front of management and explain why things cost what they are and how they work the way they do or why they're not working. It's close to management as you can get without being a manager."

Salesperson Red

Salesperson Red is 39 years old, female and, after graduating from high school, completed an apprenticeship as an industrial clerk. This makes her the only person in this group of interviews who has not completed an academic degree. For the past 11 years, the participant has been employed by the German car manufacturer Red, where she takes on a role in sales. "Meaning managing yields and revenues — roughly speaking, making money for the company by optimizing utilization and revenues accordingly. And doing that again specifically for some particular model line projects."

Engineer Silver

Engineer Silver is 30 years old, male and is currently completing his PhD in automotive engineering. He originates from Germany and has no migration background. As a working student, he was able to gain experience in the technical development of aerodynamics at the automotive company Silver for two years. Silver is located in the southwestern part of Germany and is considered one of the most important and largest car manufacturers in the world, placing itself in the premium segment. His main tasks consisted mostly of "[...] programming various tools." Furthermore, he took over analyses and research for flow

analyses using CET. The purpose had been to automate these flow analyses, allowing simulations to be evaluated independently. Consequently, his role was to "[...] contribute to and further develop this tool."

Head of PM Red

Head of PM Red is 40 years old, male and graduated with a degree in engineering before joining his current employer Red in 2010 after two years at Bosch Engineering GmbH. He has been working in the role of Head of Project Management Drives for just under two years. In this role, the participant has "[...] overall responsibility for all drive projects at the site in Hungary" and "[...] reports directly to the board of management for production." This involves the "[...] supervision and on-time start of the production of engine families so that these can be handed over to the series supervision of all participating automobile manufacturers" of the supernumerary group. Head of PM Red can therefore be defined as a corporate elite.

IM Blue

Innovation Manager (IM) Blue is 26 years old, male and currently working in the business innovation department of Blue. Blue is one of the 3 largest automotive manufacturers in Germany and is based in the southern part of the country. The participant is of German descent, but additionally has Greek roots. With two degrees in business administration and psychology, the participant can already demonstrate experience in start-up management and in the start-up scene despite his young age. For Blue he takes over tasks in the area of "[...] Start Up Evaluation and Start Up Scouting". With the HQ in Germany but further divisions in the USA, Israel, China as well as South Korea, the main task of this department of Blue is "[...] to acquire promising start ups in the early stage as a potential supplier for vehicle-oriented product solutions within the context of a venture client program".

Product Manager Silver

Product Manager Silver is 30 years old, female and was born and raised in Germany. After studying economics and working as an intern at Silver, she subsequently joined the company's sales planning department on a permanent basis. In product management for the overseas region, she is responsible for Latin America, Africa, Eurasia and a few European countries for the management of connectivity software. More specifically, she takes care of, "[...] representing the customer and the markets in the development from a product-customer perspective".

HoR Black

Head of Racing (HoR) Black is 47 years old, male, of German-Austrian origin, and entered motorsport professionally after studying mechanical engineering in automotive technology. In 2014, he joined his current employer Black, in which role he is responsible "[...] for factory operations in the World Championship in the professional GT class" and consequently holds instructional powers. With various motorsport teams under his responsibility, HoR Black can be defined as a corporate elite.

Black, as a German automotive company, is primarily known for its racing history and long-established models and clearly assigns itself to the premium sports car segment. As an innovation-driven industry, models of sport-oriented automotive companies with a connection to racing in particular constantly benefit from developments and innovations in motorsports, which are reflected in the market-oriented segment with a time lag. For this reason, a look at motorsport units is equally relevant for a company's innovation performance in the German automotive industry.

IM Green

IM Green is 29 years old, male, of German descent and joined his employer Green after completing his bachelor's degree in business administration and graduating from a start-up boot camp. There, the then 24-year-old was responsible for "[...] the structural change to e-

mobility and co-design of a start-up unit". As a business developer, he built up a team that was responsible for the issues of business incubator, venture capital and acceleration for Green until March 2021 and therefore made a decisive contribution to the company's innovation activities. As an automotive supplier, Green is the global market leader for mechanical forged components in automobiles and sells highly demanding performance parts "[...] to 80-85% in the combustion engine".

5.2. Results

The following chapter consists of the results and findings of the interviews conducted in the context of unit orientation, cultural diversity and inclusion. Accordingly, the intention of this section is to provide an empirical basis for the following analysis. In the appendix, all argumentative quotes are presented transparently. In addition, relationships are illustrated to the reader by means of figures.

5.2.1. Workplace & Unit Orientation

Unit orientation

In terms of the unit orientation of their team, five of the participants can be characterized as operational (blue) and the other five as innovative (green) (cf. appendix). In this context, project management, sales and product management belong to the operational activity profiles. PM Red (2) (Personal communication, April 08, 2022) considers this "[...] unfortunate" and adds: "It'd be nice to be more innovative but it's very much operational. You have a task and it's implementing that task. It's not defining the task." PM Red (1) (Person communication, April 07, 2022) agrees and recognizes "[...] in the meantime a very tough separation of roles", in which operational and innovative roles are divided and also due to a strict cost structure no more resources are available for unrestricted, free innovation. Product Manager Silver and Head of PM Red see this in two ways and define their role as operational, but with a strong connection to innovative products such as connectivity software and various drive projects.

IT Consultant Gold (Personal communication, April 08, 2022), on the other hand, recognizes his role as very innovation-oriented, stating that "in the agile environment and in software development, innovation or innovation engineering is always a very large component". Engineering can also be classified as a strongly innovative activity from the perspective of Engineer Silver as well as HoR Black, although HoR Black (Personal communication, April 28, 2022) sees "[...] high operational quality" as the basis for "competing against the other factory teams" with regard to the complexity and diversity of task areas in motorsport. However, success depends on "[...] innovation or further development" continuing HoR Black that innovation is a "[...] necessity [for] being successful in the long and medium term". Innovation and start up management is likewise innovation oriented in substance, although IM Blue and IM Green acknowledge an operational aspect in their role. However, both differ in the profile of their units. IM Blue (Personal communication, April 26, 2022) deals "[...] a lot with autonomous vehicles [...] and mobility concepts of the future". He said he gets "a little bit zoned in on that with potential startups that have, for example, new radar systems, new mobility solutions trying to get off the ground". As IM of Green, a supplier of mechanical forgings, the focus is less on broad technology sourcing and start up scouting, but much more specific in the relevant area.

From the results it further emerges that all participants add operational tasks to their role, but innovative tasks can only be found in some respondents.

Team composition

A conspicuous characteristic with regard to the team composition can be observed in the follow-up assessment of the results with regard to the fluctuation in the team. Operational units are designed for longer collaboration than innovative teams. PM Red (1) answers (Personal communication, April 07, 2022) that "[...] it is beneficial to work together for a long time". PM Red (2) adds: "When you start to see the team changing regularly, it becomes very difficult to work together because you always have to go through that process of storming, norming, then performing. But it's always the storming and norming before you get to the performing. And it's tough." This implies a high importance of continuous collaboration in operational activities. He further adds that "[...] staying within the project

between three and four years. That tends to be the level of consistency [at Red]“. Product Manager Silver (Personal communication, April 27, 2022) also observes that "[...] team members stay in the team for three years and then look for something else“.

When looking at innovation-oriented units, the fluctuation diverges. IT Consultant Gold (Personal communication, April 08, 2022) registers a strong dynamic in the team, which he explains with "[...] the possibilities and experiences in the consultant area" and with the fact that "[...] everyone can decide for themselves which project they want to go into“. Furthermore, IT Consultant Gold recognizes that greater dynamism is valuable to this area for "[...] motivational reasons [...] in the case of social friction, [...] or for competence reasons" (ibid.). In addition, projects in the IT sector often last only a few months, after which a shuffling of teams is not uncommon. Engineer Silver, on the other hand, sees little fluctuation in aerodynamics development. The reason for this is the specific nature of the project and the low knowledge density. In addition, "[...] there is also a lot of information security. So especially when you change from one company to another, it is common that you get a three-month lockout. [...] that's why people don't fluctuate back and forth like that“ (Engineer Silver, personal communication, April 21, 2022). The need for highly specified expertise as well as sensitive data and potential knowledge leakages consequently cause long-term collaboration in this unit.

Furthermore, an interesting finding is that all participants stated that they get along better with some colleagues than with others. This was almost universally attributed to a variance in personality traits. IT Consultant Gold (Personal communication, April 08, 2022) believes this has to do with "[...] similar interests, hobbies and background“. And Head of PM Red (Personal communication, April 22, 2022) also confirms from his point of view that "[...] people who think alike [...] are more likeable [at first]“.

Regional orientation

With regard to regional orientation, there are no differences worth mentioning between operational and innovative units. As PM Red (2) (personal communication, April 08, 2022) adequately states: "It really depends on the project". Salesperson Red (personal

communication, April 17, 2022) has "[...] intensive exchange with the sales units in [...] China, USA, Europe, [...] but also South America and Mexico", and IM Blue receives most "[...] inquiries from abroad" in the area of start up management. IT Consultant Gold defines its activity as globally oriented and emphasizes the advantages of the IT language Java, which is equally valid internationally. And while Engineer Silver is very locally oriented in the field of aerodynamics and has little contact with foreign units or partner companies, Product Manager Silver has a strongly global orientation by managing connectivity software products for various markets.

A special characteristic arises when considering the automotive supplier Green. IM Green has primarily a local focus with a very innovative role. The cooperation between Green and start ups is also rather locally oriented due to a "[...] smaller range of products" and a high specificity in the area of manufacturing and forging as well as the strong local ties of the overall company. IM Green (ibid.) describes his employer as the largest employer in the region and as a "[...] medium-sized company from southern Germany" as rather conservative. He adds: "[...] if you develop a new AI, which is supposed to examine the quality of forged components very specifically with light field imaging. Yes, then you walk around on the street in the pedestrian zone and ask if anyone wants to join in. [...] [OEMs], which look completely internationally and are open to many, many more topics. They have eight, nine different fields where they are searching."

Consequently, in terms of regional orientation, a line can be drawn between automotive OEMs and suppliers with specific niche products.

5.2.2. Cultural Diversity

Unit diversity

PM Red (1) (Personal communication, April 07, 2022) notes that "[...] culturally diversity, then [...] we don't have that as much. You have to admit that as well". PM Red (2) (Personal communication, April 08, 2022) comments as follows: "If you count Swabians and Bavarians as different cultures, then yeah [laughs]. I'm probably the most diverse there [...]". Head of PM Red (Personal communication, April 22, 2022) is himself an expatriate, but has in his

Hungarian unit "[...] actually only Hungarians". He adds, however, that "[...] most of us have had an expatriate experience somewhere and have either been to Germany or some are also from Mexico". In this context, Head of PM Red goes on to report that "[...] it is extremely noticeable to the people. Those who have had to deal with other cultures, who have lived in other cultures, act and react very differently". (ibid.). And Product Manager Silver (Personal communication, April 27, 2022) also notes that "[...] most [units] were positioned very homogeneously [...]" and adds, "It would certainly have been even more productive if we had been more diverse".

Four of the five respondents assigned to innovative units, on the other hand, emphasize working in a very culturally diversified environment. For instance, IT Consultant Gold (Personal communication, April 08, 2022) finds, "[...] that we have a Bosnian colleague, one from Spain, me with Turkish roots, a colleague from Ghana, one from Israel, and three German colleagues. I'd say we're at our maximum culturally". Equally, however, he emphasizes the "[...] multicultural area of business" which is mirrored by the unit in a certain way (ibid.). Engineer Silver (Personal communication, April 21, 2022) also recognizes that his team was "[...] [culturally] even very diverse." He had "[...] no women on the team." That was, however, generally the case in engineering. With colleagues from Bali, Argentina and Bolivia, there were "[...] basically more colleagues with foreign background [...] than German colleagues" (ibid.). IM Blue also defines its unit as diverse due to the daily and intensive cooperation with global departments in the USA, Israel and Asia, and HoR Black (Personal communication, April 28, 2022) identifies a "[...] share of foreigners of 70%", especially in the engineering of its factory teams, while it is "[...] 20%" among the mechanics. Here, however, it is mainly colleagues from other European countries "[...] with one Argentinean as an exception" (ibid.). He justifies this by saying that the density of knowledge is greater in this way, while at the same time cultural differences "[...] are hardly different", which benefits mutual understanding.

The one exception in terms of cultural diversity of innovative units is IM Green, who was exclusively part of very homogeneous teams. He himself has — like the company — "[...] a very strong connection with his home region". Furthermore, Green had grown rather conservatively and simply homogeneously as a supplier to "[...] classic industry" and as a "[...] medium-sized company".

However, it is still noticeable that many of the operational, but also innovative units have a higher level of gender, age and technical diversity. PM Red (1) (Personal communication, April 07, 2022) states: "If you have a woman in the team, for example, then [the climate] is immediately different. That is quite important, definitely". PM Red (2) (Personal communication, April 08, 2022) also sees "[...] a good mixture of women, a good mixture of young and old" as beneficial. It can therefore be stated that most units have some form of unit diversity, although this may not always be cultural diversity.

Consequently, a clear tendency can be identified with regard to the degree of cultural diversity: Based on these findings and adding the results from unit orientation, operational units are culturally more homogeneous and innovative teams are culturally more heterogeneous. This correlation can be seen in the figure 7 below, where the categorization is based exclusively on the interpretation of the statements of all participants. As the trend line in the graphic shows, companies in the German automotive industry are more culturally diverse as their innovation orientation increases. The only exception is IM Green, which reports a weak to moderate level of cultural diversity despite a high innovation orientation.

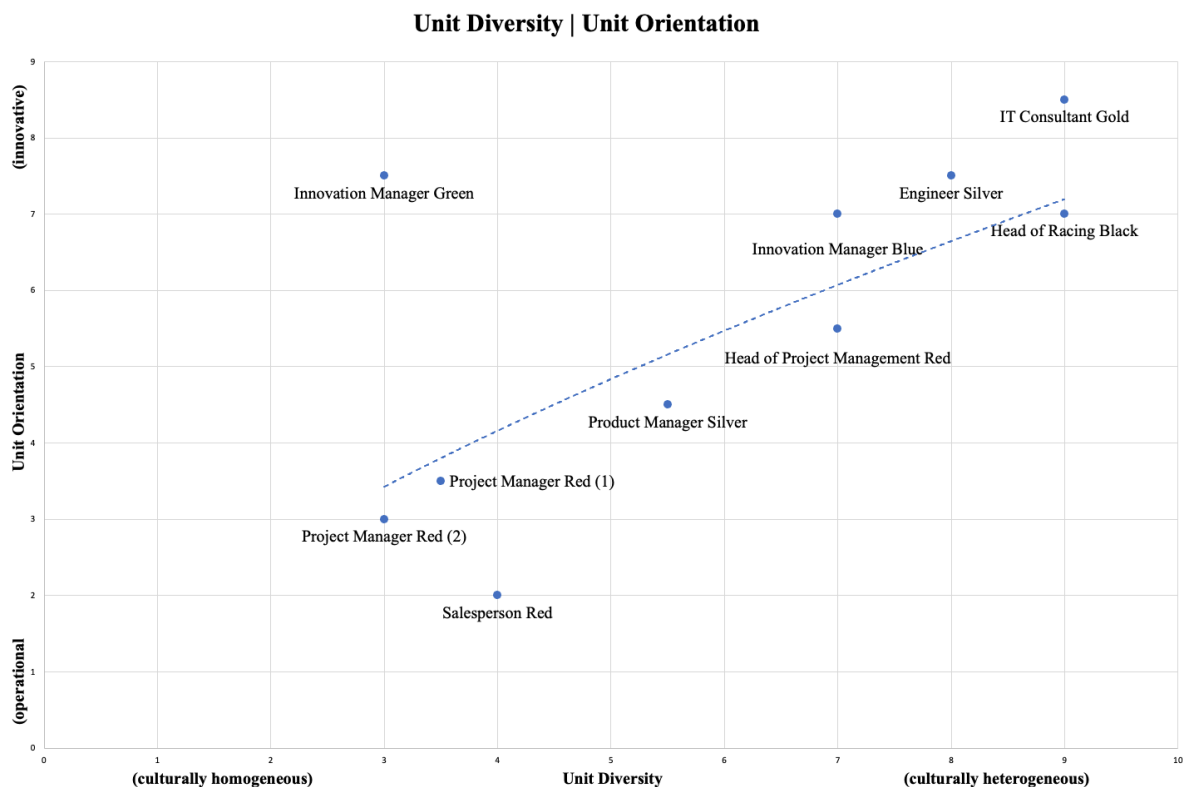


Figure 7. Participant distribution in terms of unit diversity and unit orientation (own work)

Cultural differences

In total, six of the ten participants have experienced cultural or intercultural differences at their workplace. PM Red (1) (Personal communication, April 07, 2022) described a context in which a Turkish colleague in his team escalated a conflict regarding adherence to deadlines. The interviewee characterizes Germans as "[...] the workhorse" and sees "[...] two attitudes of work ethics clashing" with regard to temporal dimensions such as punctuality and schedule adherence.

PM Red (2) (Personal communication, April 08, 2022), himself Canadian, on the other hand, perceived few cultural differences after immigrating to Germany in 1999: "[...] as a Canadian I feel very comfortable within the German system. I fit in and I understood 'Okay, this is the health care system and this is how that works and that's how this works'. There was no great shock". Furthermore, he characterizes Germany as rather reserved and highly long-term oriented: "You don't get a lot of people in Germany coming and giving you a hug on your first day [...]. But if you're looking for people that are really solid, if you're looking for people that are really willing to make a long term commitment to getting to know you, then Germany is a pretty inclusive place." (Ibid.).

Furthermore, Salesperson Red has already perceived cultural differences between Germany and Asian countries such as China and Japan, identifying differences in the context dimension, i.e. the directness of communication. According to this, Asians are less direct and tend to avoid the concrete expression of facts.

Head of PM Red (Personal communication, April 22, 2022), on the other hand, expresses the experience that Hungarians are very "[...] human in their approach". The human orientation is "[...] much more important than the technical level". At the same time, compared to Germans, Hungarians are "[...] very cautious towards hierarchically higher people".

Furthermore, IM Blue (Personal communication, April 26, 2022) reported strong cultural contrasts with a founder from the Middle East. On the one hand, punctuality was a problem, on the other hand, the female head of Blue's department had to face the situation of not being accepted as a leader by the founder of the start-up under discussion. One should bring the "[...] right boss", after which the negotiation was "[...] broken off very quickly". According to

IM Blue, this lack of acceptance of women as authority was a cultural characteristic that he had already encountered many times in similar cultural contexts.

However, IT Consultant Gold, representative of most of the respondents, emphasized that they did not want to confirm a stereotype and also highlighted the fact that personal characteristics also exhibit intercultural variances. Consequently, personality profiles can be assigned in part to a cultural origin, but they are by no means tenable for general statements about cultural background.

Conflicts due to cultural diversity

As can be seen from the literature review and theoretical framework, as the degree of cultural diversity increases, so does the complexity of interaction and consequently the potential for conflict.

As outlined in the previous section, the results provide insights into the cultural dimensions of time and context. Head of PM Red (Personal communication, April 22, 2022) also reports on differences in hierarchical thinking, i.e. power distance, between Hungarians and Germans and describes: "This is actually the biggest challenge for me here, to be honest. Getting people to talk openly because they just don't dare to some extent."

Language barriers can be mentioned as the most frequently mentioned driver for culturally related conflict points, with this being confirmed by four of the ten interviewees. IT Consultant Gold (Personal communication, April 08, 2022) recognizes language barriers as "[...] the greatest potential for conflict", but equally restricts his comments and adds that this is "[...] within limits [because] in the environment where I currently find myself, English is taken for granted". This comparatively small effect is confirmed by other respondents, implying that MNCs as globally oriented companies require English as a language. PM Red (2) (Personal communication, April 08, 2022) adds from the immigrant's point of view that he himself had linguistic problems, but also saw the task of integration on his own: "So you have to kind of move a little bit towards the people there. I made the decision to come to Germany. I have to adapt."

Head of PM Red (Personal communication, April 17, 2022) sees the problem of possible language barriers casually and even considers it an advantage: "It's also practical, because you think about it: 'How do I get the message across to him as simply as possible? How do I get across in simple terms what I actually want?'" Consequently, language barriers can also lead people to think more carefully about an issue and communicate it in a more purposeful way. However, the interviewee adds that language might also complicate processes. He himself feels "[...] the added value from diversity and different approaches [...] is so much higher than the little bit where [one] has to speak a bit slower, where one might [...] have to ask again." This implies that cultural diversity brings advantages and disadvantages, which contrast each other in a tradeoff.

Beyond the aforementioned culturally motivated conflict drivers, it is primarily factual conflicts that are mentioned. Conflicts of interest between departments, competition for resources or bureaucracy as an innovation killer are aspects that trigger stress in addition to perceived lack of competence of colleagues and external factors such as "[...] timing or resource constraints" (PM Red (2), personal communication, April 08, 2022). Especially project managers are "[...] in the center of a certain distorted image, where resources or interests are fought over". Here it is important to "[...] find the best solution for the entire company" (ibid.).

5.2.3. Inclusion

Perceived inclusion

With regard to perceived inclusion, the results show a clear tendency for innovative units that are equally culturally diverse to exhibit a higher degree of inclusion. However, it must be noted at this point that operational units that tend to be more culturally homogeneous also show a good level of inclusion. The correlation of this relationship is shown in figure 8 and figure 9 below.

Furthermore, it is also noticeable that IM Green was the only participant to report a weak level of inclusion. All other four innovative units are characterized by a strong degree of inclusion, while among the operational units three units reported an inclusive work

environment and two participants perceive their work environment to be inclusive but cannot observe any corresponding measures. PM Red (2) (Personal communication, April 08, 2022) describes on the one hand that "[...] there's all kinds of different people and they're all heard and listened to and accepted. So, yeah, I think it is inclusive." On the other hand, however, he feels that "[...] there is specific biases within the decision making culture within [our unit] and that's effecting us negatively. The recommendations that we're putting on the table for the last four months are being ignored." Consequently, there is a strong focus on operational achievements and objectives with less emphasis on inclusive measures, leading to lower motivation.

Salesperson Red and PM Red (1) also perceive a high level of inclusion and no discrimination, but cannot name any specific inclusive measures or aspects. However, they always point out that as an "[...] international company" they quickly switch to English when necessary and do not value comments as negative (Salesperson Red, personal communication, April 17, 2022). An inclusive language as well as the acceptance of new ideas are therefore performed. Product Manager Silver (personal communication, April 27, 2022), on the other hand, describes a "[...] strong team cohesion" and mentions "team events and employee surveys to gather new ideas on how we can give even better feedback. That's where our managers are very involved, although it's actually already pretty good." She continues: "They are all people with whom you can talk quite openly, no hierarchical thinking where you now have to feel frightened, constricted or something, but really a good relationship."

Respondents from innovative units, with the exception of IM Green, also consistently report a strong feedback system, great commitment from managers, flat hierarchies and a great openness to new ideas and approaches. IM Blue (Personal communication, April 26, 2022) sees inclusion as "[...] a must" and equally important as "[...] a space where you can address everything. Communication and feedback". Interestingly, he expresses that it is not actively forced, but arises naturally: "[...] it is not that I see actively that one wants to have this cultural diversity, but rather that one really wants to activate the specialties, the abilities of the one person". This implies a high level of CQ through a natural acquisition of skilled people on a global basis. Furthermore, it can be inferred from this statement that due to cultural blending an international workforce exists and one does not have to actively search

for culturally diverse employees. Furthermore, Engineer Silver (Personal communication, April 21, 2022) describes the possibility of "[...] submitting hand-sketched proposals of any ideas", which "[...] are followed up" and also remunerated. And IT Consultant Gold likewise expresses the possibility of further training measures, which further increases motivation and employee ability. HoR Black (Personal communication, April 28, 2022) adds that the maximum transparency in racing results in a strong culture of exchange and error, as well as direct communication, which contributes to an inclusive workplace: "That's what's so great about motorsport, that everything is transparent. It starts with the drivers and their data. There are many systems in the car that monitor the car. In other words, the engineers who developed it or look after it are also absolutely transparent". That transparency, which everyone on the team is used to, requires a great deal of trust, he explained, without which there is no success on the team.

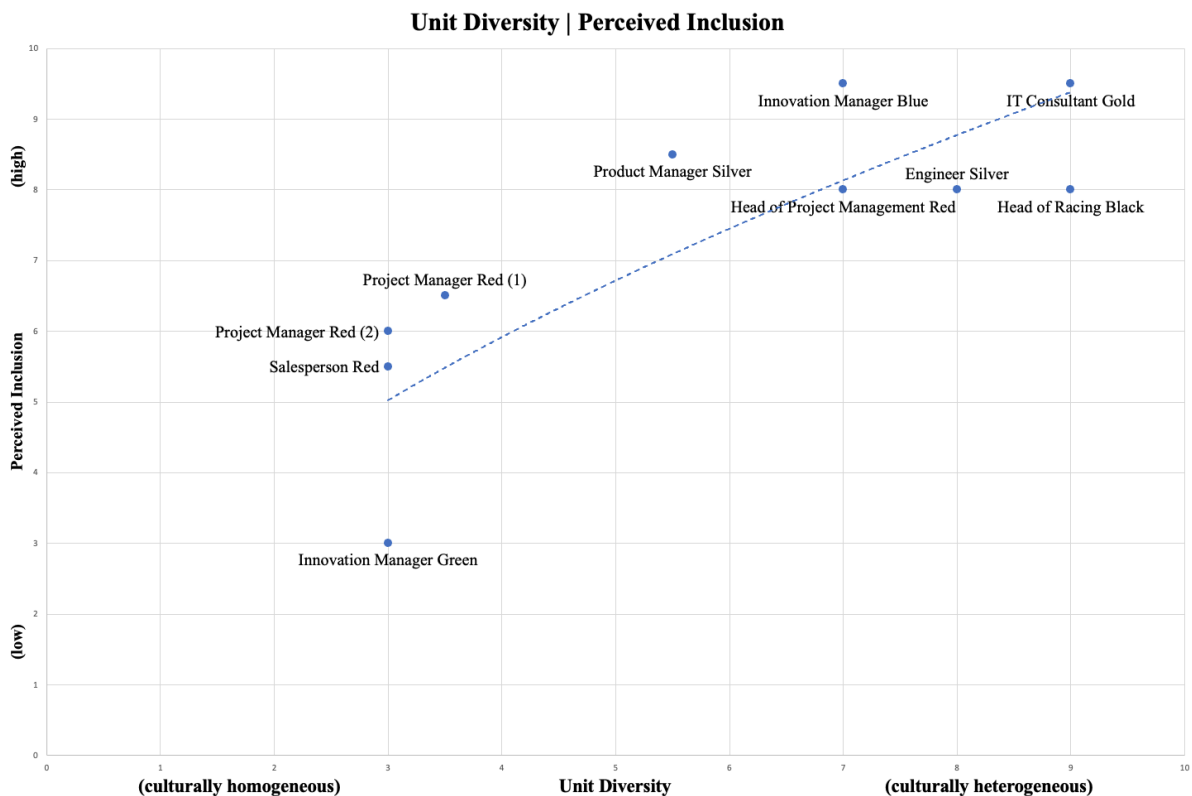


Figure 8. Participant distribution in terms of unit diversity and perceived inclusion (own work)

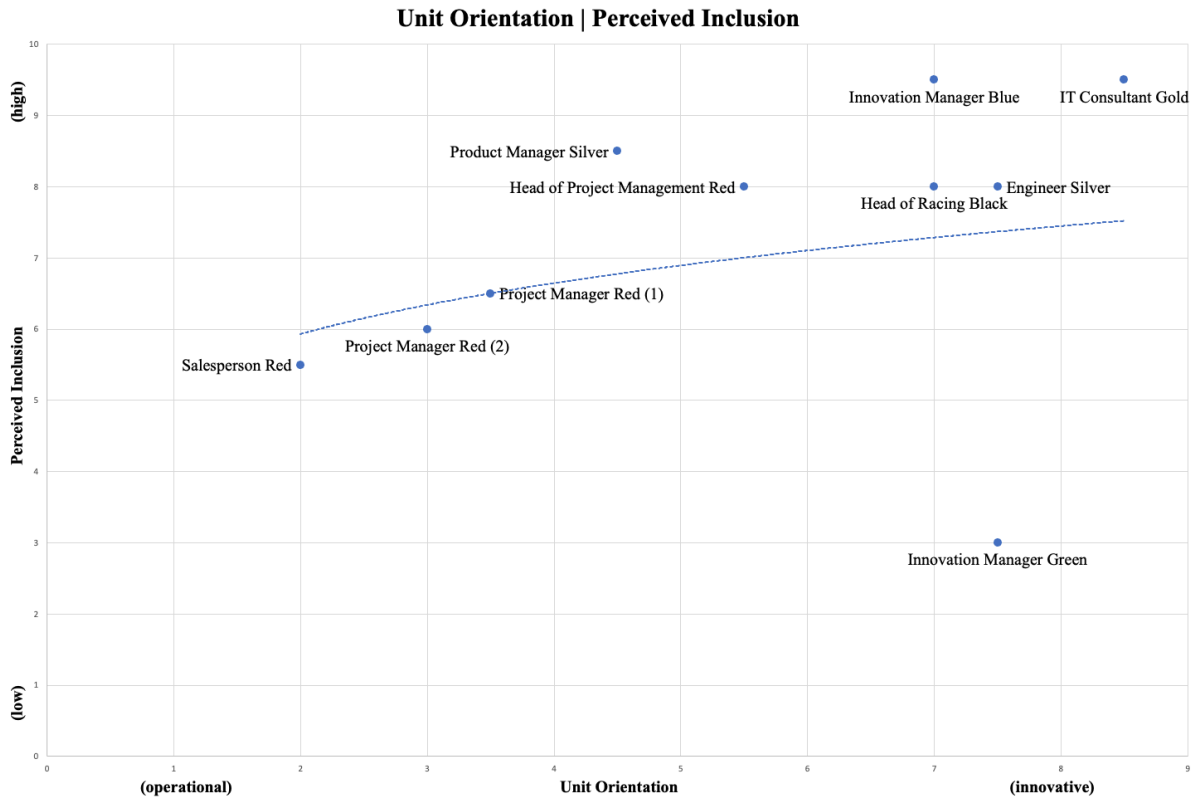


Figure 9. Participant distribution in terms of unit orientation and perceived inclusion (own work)

The variance of inclusive measures in the units is further expressed that PM Red (1), PM Red (2) as well as Salesperson Red reported weak motivation. On the one hand this was an overuse of the term "compliance", on the other hand negative effects due to the current COVID-19 pandemic with missing compensation mechanisms and finally low motivation due to internal factors like missing consideration and listening by the management. PM Red (1) (Personal communication, April 07, 2022) expresses himself in this context as follows: "If you don't feel like doing something, you just have to say "compliance". It's so hard to refute anything then, it's madness. Then at some point you're not up for it either." PM Red (2) adds, "[The project is] not as profitable as it needs to be. And despite showing this four, five, six times, the top management continues to send the time and says: 'Well, do this and make this'. At a certain point the team is just done, there's nothing more to look at, there's no more stones to turn [...]. If management doesn't follow your recommendations, repeatedly, despite really coming in with some very good argumentation, it becomes very, very disappointing."

IM Green (Personal communication, May 05, 2022) falls outside the trend of more effective inclusion in innovative teams. He himself feels that "management-attention is also insanely important as intrinsic motivation", which he did not perceive. He reports that he is "[...] a fairness person. I need to feel that things are fair.". This culture of trust and fairness "[...] then broke down a bit with the boss," which is why he "[...] took the first step and quit".

The correlations from figure 8 and figure 9 above show a clear tendency that a high level of inclusion is perceived especially in innovative, culturally diverse units. However, IM Green as an innovation-oriented unit is neither culturally diverse nor inclusive. This finding will be discussed in the further course of the analysis.

Adaptation process

The results indicate a strong cultural adaptability. All respondents except for HoR Black expressed experiences according to which team members adapt to the characteristics and working methods of their colleagues. For example, PM Red (1) (Personal communication, April 07, 2022) describes that after an initial phase with potential for conflict, an adaptation process takes place: "Well, the colleagues also adapt to each other somehow. I think that happens after a while. But at the beginning, things could still go wrong, yes. That's what I'm feeling at the moment." IT Consultant Gold also noticed initial difficulties in the cooperation of cultural diverse team members and speaks of "[...] initial friction, which arises, but which continuously improves and which does not represent a strong blocker in the work". PM Red (2) (Personal communication, April 08, 2022) adds that in a project with an Italian sports car manufacturer of the same group, "[...] it became sort of a routine [...] that the technical project leader and myself telephoned everyday". Furthermore, it was about "[...] the experience of working together that brings a team together. That's a real human, universal characteristic". However, he also emphasizes the importance of the willingness of both sides to adapt: "Both sides had to adapt there. It takes time, it takes time and effort and emotion and you have to be willing to do it" (ibid.).

Consequently, adaptation processes are not only necessary in culturally heterogeneous environments, but also in more homogeneous operational units, whereby a greater barrier to adaptation is implied in culturally heterogeneous units.

Outcomes of cultural diversity & inclusion

As already discussed, cultural diversity has positive and negative potentials that can influence the unit and consequently organizational outcomes. In view of the respondents' answers, the chances and positive influences clearly outweigh the negative ones. Above all, the creativity and new perspectives gained would enrich the work — in operational and innovative units alike. PM Red (1) (Personal communication, April 07, 2022) finds that it "[...] definitely [makes] sense [to have] a wide variety of personalities or cultures. [...] I think we can learn from that before everything is always the same". IT Consultant Gold (Personal communication, April 08, 2022) adds: "I think it's also very important for oneself, because you are open to new things and can therefore also take into account many different ways of thinking and also many different innovations that you don't see at first glance, perhaps so. For us in the automotive industry now, where we are currently active, we know that the customer is marketing its products internationally and not just in Germany." Consequently, cultural diversity is also beneficial in the context of the global focus of MNCs in the automotive industry, which continues to stimulate the development of personal competencies, he said.

PM Red (2) (Personal communication, April 08, 2022) further recognizes that culturally heterogeneous teams outperform homogeneous teams. The key here is the management of different cultures and the establishment of processes that exploit existing potential: "I mean, if you look at the two best-selling cars, they're both cars that were developed jointly by Red and Yellow. The Project 1 and the Project 2 work very, very well."

Head of PM (Personal communication, April 22, 2022) also recognizes that personal experience in different cultural environments supports personal as well as professional development: "When I come back [to Germany] and have another conversation like the one I had with the Hungarians, I will of course act differently than I did before. That is simply a

completely different understanding. [...] you can see that professionally, as well as on a personal level."

Product Manager Silver (Personal communication, April 27, 2022) also recognizes added value in "[...] avoiding group think behavior" and HoR Black (Personal communication, April 28, 2022) "[...] definitely finds [cultural diversity] fruitful" and sees a clear connection between cultural diversity and innovation: "If you were to say I have to make a team of only Germans, you would probably have people who have mainly worked in German national motorsports. And then, of course, you're definitely less innovative. That's why I would say that this internationality is definitely an advantage."

This shows that respondents from operational units with lower levels of cultural diversity also strive for higher cultural diversity and perceive that the benefits are greater.

5.2.4. Further Findings

The responses of the interviewees allow further contributions to the research question that are worth mentioning. Accordingly, PM Red (2) (Personal communication, April 08, 2022) emphasizes that a strict separation of units into operational and innovative is only possible to a limited extent: "There is not one department or another. Sometimes you find very creative people in departments where you think, 'How did that person end up there? How did that work out?'" Furthermore, his statements imply that the selection and development of team members strongly depends on the company philosophy and corporate culture. Accordingly, Red is "[...] a company of engineers for engineers. Red basically thinks that you can put an engineer into any department and they'll be okay. [...] So we tend to be pretty similar in a lot of cases". This implies a low level of technical heterogeneity.

Head of PM Red (personal communication, April 17, 2022) acknowledged regarding team composition and equal treatment in terms of procedural justice that it is difficult "[...] to treat all people equally". The impression of unequal treatment can therefore vary in different contexts, depending on the perception of the relevant person. This implies the management of people in line with the degree of cultural diversity within the unit.

IM Blue also confirms the current automotive trends of ICT and autonomous driving and defines start up collaborations as an opportunity to develop new processes as a large corporation, as well as qualities such as agility and the allowance of a culture of error: "And I notice that [start ups] sometimes even solve certain problems better than a large corporation. And I think that's also why Blue works with startups. [...] A start up can adapt to a problem in seconds. And I notice that with startups, things are much looser. There are not these hierarchies, these regulations, let's say, that hold back a new implementation, an innovation." Furthermore, the interviewee emphasizes that the complexity of cars as products allows for a wide range of possible innovations and that Blue is consequently searching for collaboration partners on a global basis in areas ranging from connectivity, robotics and logistics to cyber security and NFTs. Accordingly, it is understandable that "[...] Blue outsources many functions to start ups" (ibid.).

Particularly interesting is the comparison between IM Blue, who scouts very globally for innovations in diverse areas, and IM Green, who has a very concrete product portfolio and as a result scouts more specific knowledge. In addition, IM Green (Personal communication, May 04, 2022) emphasizes that "[...] the product of [forged parts] is very universal. It's not like it has to be adapted to any market-specific requirements. It works the same everywhere." This comparison between automotive suppliers of specific forged parts, which can be incorporated almost analogously in the end product in various vehicles of various OEMs, and OEMs, which develop or purchase highly complex and diversified partial products, is therefore of particular relevance for the consideration of cultural diversity and inclusion.

Finally, it is striking that the current burden of the COVID-19 pandemic is causing social interactions between team members to be reduced to a minimum. Social distancing measures such as home office lead to a reduction of contacts to work-related topics. Furthermore, the lack of presence leads to higher "redundancy" and to the fact that "[...] the mood is worse and that things are not said immediately" (PM Red (1), personal communication, April 07, 2022). In addition, the seemingly less controllable home office environment leads to "[...] the people who tend not to be punctual [coming] even later or not coming at all" (ibid.). A lower attention span in the context of videoconferencing and home office further leads, according to PM Red (2), to the fact that "[...] every time you describe something, it's a little different. You end up having different ideas across the team. That leads to big conflict". This implies that

the current widespread work environment militates against high inclusion and slows down the processes.

5.3. Analysis

This section constitutes the evaluation of the findings from the previous chapter and places the results in the context of the literature review and the theoretical framework.

Workplace

As can be understood from the previous chapter, the respondents were separated according to unit orientation. It is noticeable that in terms of team composition and the degree of fluctuation, operational units are primarily aimed at long-term collaboration. Seo et al. (2020) address this form of repeated collaboration and find that a high level of repeated collaboration in the team reduces costs, but is equally less suitable for new forms of approaches or creativity. Activities such as project management or in sales are characterized by high consistency, which initiates adaptation processes in the team and team members experience a greater level of cohesion. In addition, it was emphasized consistently that conflicts on a personal level would often depend on character traits and that in operational units, people get along better with colleagues of similar interests if they work together for a longer period of time. This can be explained by the similarity-attraction paradigm by Heyne et al. (2009), according to which individuals tend to be attracted to people who are similar to themselves. While a universal transferability of the SAE to other cultures remains in question, it is confirmed, at least for Germany, that the SAE has its justification. Following Hofstede's cultural dimensions, Germany is a country with high long-term orientation, where individuals and institutions tend to plan for the long term and to be in control. Furthermore, Beugelsdijk et al. (2017) show that identity formation in Germany takes place primarily through supra-national cluster and that the country is the only community of countries in the world to experience greater identity formation from supra-national regions than from national levels. Again, this underscores the strong ties to regional characteristics and emphasizes the importance of cohesion in operational units in the German automotive industry. With the

exception of Engineer Silver, who works in a highly specialized area of aerodynamics and identified low knowledge density as well as potential knowledge leakage as a reason for low internal fluctuation, the remaining innovation units are characterized by moderate to high fluctuation. Especially in dynamic and highly competitive environments, high turnover serves to avoid conflict and expand competencies.

The first research question related to the connection between cultural diversity and the unit orientation of specific teams. As can be seen from the results, this question can be answered by the conclusion that innovative units in the German automotive industry tend to be more culturally heterogeneous than operational units. This cultural diversity in innovative units is predicated on the relationship between cultural diversity and cognitive diversity. With diverse experiences, approaches and values, culturally diverse teams complement each other, resulting in increased creativity and knowledge creation. As an example, IM Blue, as a start-up manager, is searching for suitable start-ups on a global basis and is pursuing maximum knowledge acquisition with internationally distributed departments in culturally diverse teams.

The connection between higher cohesion in operational units and higher cultural diversity in innovative units leads to the distinction between PACAP and RACAP. As explained in detail in chapter 3, innovation performance is strongly influenced by knowledge creation and knowledge integration. Knowledge creation can be enhanced by cultural diversity, whereby primarily acquisition and thus PACAP benefit from knowledge through cultural diversity. Cohesion, on the other hand, contributes to improved transformation and exploitation of knowledge, and consequently to an increased RACAP of the company. Only a well balanced distribution of PACAP and RACAP leads to a strong ACAP and consequently to a balance of strong knowledge creation and appropriate integration of this knowledge.

However, operational units also benefit from avoiding group think behavior and using unorthodox approaches. They must, nonetheless, avoid interfering in the operational implementation and integration of knowledge. Provided that cultural diversity in operational units does not cause higher costs than benefits due to inclusive measures, operational teams are also better positioned if they are culturally diverse. Some units, such as that of Head of PM Red or Product Manager Silver, try to achieve this by allowing expatriates to gain

experience abroad or by integrating new experience from other departments as part of personnel rotation. In addition, it is noticeable that operational units try to increase cognitive diversity through age or gender diversity and to compensate for the low cultural diversity in a way in which fewer inclusion measures are necessary. With similar interests or a similar origin, a high degree of age and gender diversity leads to similar benefits from cognitive diversity. However, based on the variance of cultural diversity in operational and innovative units, it can be assumed that a high degree of cultural diversity causes comparatively greater knowledge creation than gender or age diversity. This is due to the argument that it is primarily cultural influences and experiences that are beneficial in the context of globally operating MNCs. It can be assumed that a similar capacity for adaptation in complex contexts cannot be achieved by age or gender diversity with similar cultural backgrounds.

Cultural Absorptive Capacity

It is important to stress, however, that there may be situations where innovative teams have high cohesion or low cultural diversity. In the case of Engineer Silver, it is a highly specialized expertise with low knowledge density, in addition to which possible knowledge leakages would lead to corporate disadvantages. In the case of IM Green, on the one hand, the company is very one-dimensional and universal in terms of its product portfolio, causing the organizational focus to become less dynamic and international, and on the other hand, the corporate values are focused on tradition and local orientation. This conservative nature of the supplier Green, as well as very specific know-how consequently leads to a lower need but also lower ability to establish cultural diversity in the company. In the following, I define this organizational characteristic as *cultural absorptive capacity* (CACAP).

The figure 10 below is an extension of the model of ACAP according to Zahra and George (2002). In the context of MNCs, cultural diversity has become an essential source of sustainable competitive advantage. In this setting of CD as a knowledge provider, the potential absorptive capacity (PACAP) is increased by culturally diverse units. In other words, the potential knowledge base is strengthened. The realized absorptive capacity, on the other hand, defines the actual integrated knowledge. Consequently, only what can actually be implemented for the company's product or service can lead to a competitive advantage.

Cultural absorptive capacity influences PACAP, as in Green's negative example, through the organizational *context* as a potential knowledge base and strategic orientation, but can also improve RACAP through the organizational capability of CQ, cultural awareness and *inclusion*. The latter includes the social integration mechanisms introduced by Zahra and George (2002), which can enhance the intersection between PACAP and RACAP. This dimension is taken up in the concept of CACAP and discussed under inclusion in the remainder of the analysis.

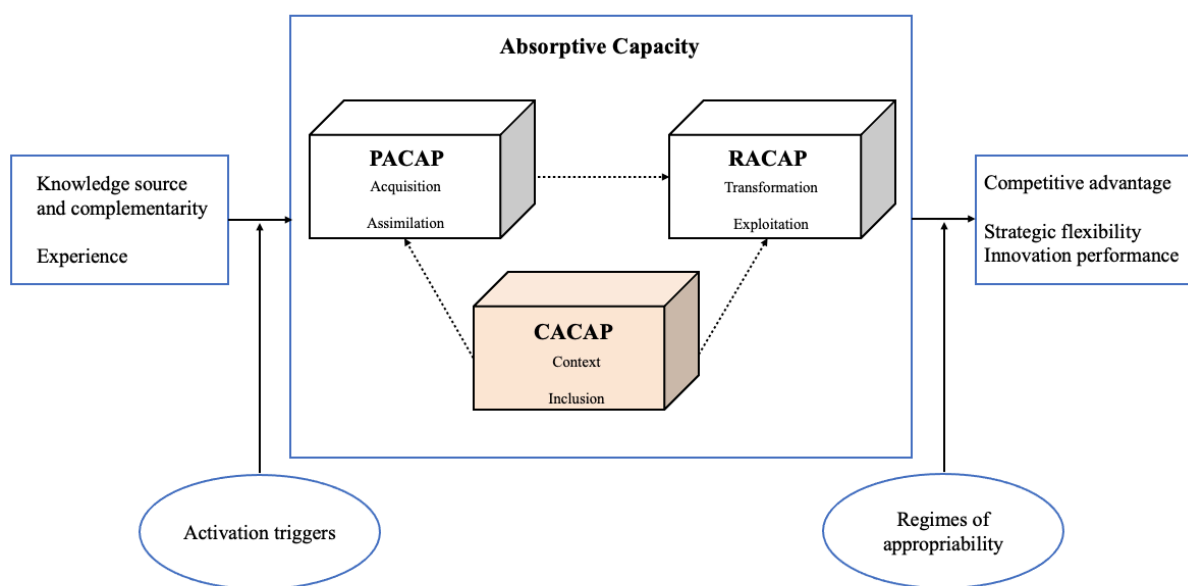


Figure 10. A Model of CACAP (own work, based on Zahra & George, 2002, p. 192)

Cultural Diversity

The interviewees referred to various comparisons with regard to their experiences with cultural differences in the working environment. Most of the potential for conflict was expressed in terms of the cultural dimensions of time and context, and to a lesser extent in terms of possible language barriers. Time and context define the punctuality and adherence to time as well as directness in communication. According to Winkler and Bouncken (2011), both dimensions are rather low to medium level dimensions of culture, which are sensitive to time adaptation. Head of PM Red underlines a strong caution of Hungarians towards

hierarchically higher persons. Following Hofstede Insights database (2022d), Hungary has a significantly higher score for the power distance at 46 than Germany at 35. It is appropriate that the interviewee concludes that the greatest challenge for him is to encourage his employees to communicate more openly. According to Winkler and Bouncken (2011), power distance is a deep-level culture dimension and refers to core beliefs. As a result, adjustment is very difficult and requires the highest level of inclusion to avoid potential conflicts and promote strong team performance.

As Watson et al. (1993) find, potential benefits of cultural diversity depend on the relevant time frame. This can be linked to the results regarding an observed adaptation process. Possible conflicts and costs due to coordination or language barriers are gradually reduced by mutual understanding, which gives cultural heterogeneous teams the potential to outperform homogeneous teams in terms of organizational outcomes and innovation performance. As PM Red (2) described, the most successful projects under his leadership happened in collaboration with an Italian sports car manufacturer. He himself emphasizes the willingness to adapt on both sides. This willingness to integrate and accept culturally diverse teams is reinforced by greater commitment. Motivated employees have a higher willingness to share resources, which is especially necessary in cultural diverse environments. As noted by Minbaeva et al. (2003), cultural training can increase employee ability and perceived fairness can increase employee motivation. Both dimensions have a positive effect on the ACAP of a unit, which is confirmed by the fact that innovative, more heterogeneous units in this study perceive a higher motivation and equally a more inclusive workplace.

The RBT also receives confirmation in the results that it is primarily dynamic environments in which units are more culturally heterogeneous. Companies use CD as a resource to be able to rely on more innovation and better adaptability in dynamic and highly complex environments. Consequently, CD at IM Blue is a powerful resource to better adapt in the global scouting of start ups in different markets and to ensure smoother cross-border interaction. Engineer Silver also describes a highly culturally diverse workforce as a source of new ideas, and HoR Black sees cultural diversity as a prerequisite for innovation and long-lasting success. As a resource that is difficult to imitate due to causal ambiguity and social complexity, those units make use of cultural diversity to generate a sustainable competitive advantage in the long term. Increased adaptability in dynamic markets is particularly

important for OEMs, which is why the development of dynamic capabilities also benefits from cultural diversity.

Inclusion

As Zahra and George (2002) find, social integration mechanisms can positively influence the relationship between PACAP and RACAP. With CACAP, I have extended this model. An essential characteristic of CACAP and organizations with great diversity management is inclusion.

As mentioned earlier, inclusive measures such as adherence to formal processes or high perceived procedural justice can lead to greater motivation and consequently increased ACAP. According to IM Green and PM Red (2), the commitment of superiors can also have a positive effect on intrinsic motivation and therefore lead team members to greater commitment and a higher willingness to share resources. These effects are essential for an organization's innovation performance.

Winkler and Bouncken (2011) find that inclusive measures and dimensions such as 'new ideas are welcome', a strong basis of trust, a good feedback culture or an inclusive language can contribute to an overall strongly improved participative safety. This is required in the context of knowledge creation for collecting and developing new ideas. Building on this and in the context of the findings of this study, it can be concluded that inclusion has a higher potential for impact in culturally diverse units compared to homogeneous units. Diverse opinions need to be heard, and conflicts of opposing views need to be avoided and mediated in a purposeful way. Homogeneous units also benefit from inclusive measures, however, based on the results of this study, they tend toward more cohesion and harmony themselves.

In the context of the dimensions of inclusion presented in chapter 3.3.2, the results of this study confirm the order of the dimensions. New ideas are welcome, a strong feedback system, a solid culture of trust, commitment from superiors through further training and attention, high PJ and an inclusive language are the aspects that are particularly important to the respondents on the one hand, but were also mentioned most frequently among the existing dimensions in the units concerned on the other. Especially four of the five innovative units

had concrete examples of inclusive measures, while the representatives of the operational units perceived a mostly high degree of inclusion, yet in some cases could not express concrete actions or reported some negative aspects.

Social cognitive theory (SCT) addresses how people acquire new behaviors based on cognitive processes. Through observational learning and required self-efficacy, individuals learn to observe, assess, and appropriately imitate behaviors in new cultural contexts depending on their underlying motivation. High inclusion has the potential to accelerate this adaptive process of observational learning through the development of cultural intelligence (CQ), i.e., high cultural awareness, appropriately adapted behavior, and the ability to constantly evaluate. An inclusive workplace leads to greater self-efficacy through strong perceived participative safety. The development of increasingly diverse countries and organizations, i.e. cultural blending, creates a strong dynamic of contexts in which individuals perform observational learning and adaptation processes. It can be assumed that with increasing complexity individuals internalize the handling of this adaptation process further and that the negative effects of cultural diversity continue to decrease with time. While core beliefs and cultural differences remain, adaptability increases, which consequently leads to a situation where inclusive measures can leverage the potential of cultural diversity and reduce potential barriers and costs through increased coordination. As an example, language barriers can be mentioned based on the results of this study. Many of the interviewees have had experiences with language barriers, but they equally emphasize that in the context of MNCs an adaptation to English has occurred and that the potential costs due to slowed down processes are significantly lower than the benefits received.

The same reasoning is admissible for social identity theory, according to which people subscribe to an identity based on stereotypes with typical characteristics. As the theory conveys, these identities are variable to some degree. Depending on the context, identities can adapt and change, analogous to the ascribed characteristics. Social trends or external influences can consequently change a social identity. This adaptability, in the context of the cultural mixing argument, follows a development whereby the negative effects of social identity theory are smaller compared to the advantages and benefits as defined by cognitive theory.

It becomes apparent that the variance of the effects of CD diverges with the assumption about the static and homogeneity of culture. Following the assumption of a stolid culture as advocated by Hofstede or GLOBE, the negatively associated perspectives of SCT and SIT hold a legitimate point of view. However, if culture is defined as dynamic and heterogeneous as Tung (2008) and Berry et al. (2010) do, SCT and SIT lose the argument in the context of increasing cultural blending. The potential gains in innovation and benefits from CD outweigh potential costs from coordination and inclusion. The results of this study clearly tend toward a highly dynamic nature of culture, especially in the context of MNCs. In these dynamic and adaptive structures of culture, inclusive measures consequently have a great potential to contribute positively to corporate success and to positively influence the relationship between cultural diversity and innovation performance.

The discussed connections and relations are revisited in the following section as a conceptual model and presented graphically. In the context of the theoretical framework, the content of the following section is solely based on the results and the discussion of this study.

5.3.1. Conceptual Model

Team performance

Based on the results as well as the analysis, adaptation processes as well as associated additional costs due to coordination, slowed down processes, increased transaction costs in cross-cultural interactions as well as the establishment of inclusive measures of culturally diverse teams are dependent on the time frame examined. Van Knippenberg et al. (2004) find that after a period of adaptation, culturally heterogeneous teams outperform homogeneous teams and the benefits of diversity outweigh the costs. Figure 11a shows this relationship in the context of time. According to Watson et al. (1993), the timeframe considered is essential for the evaluation of this cost-benefit tradeoff. If the timeframe from figure 11a were doubled, the benefits would clearly outweigh the costs. Figure 11a shows a situation in which culturally diverse individuals with their universal characteristic of adaptation get used to the characteristics and working methods of their colleagues and perform a learning process.

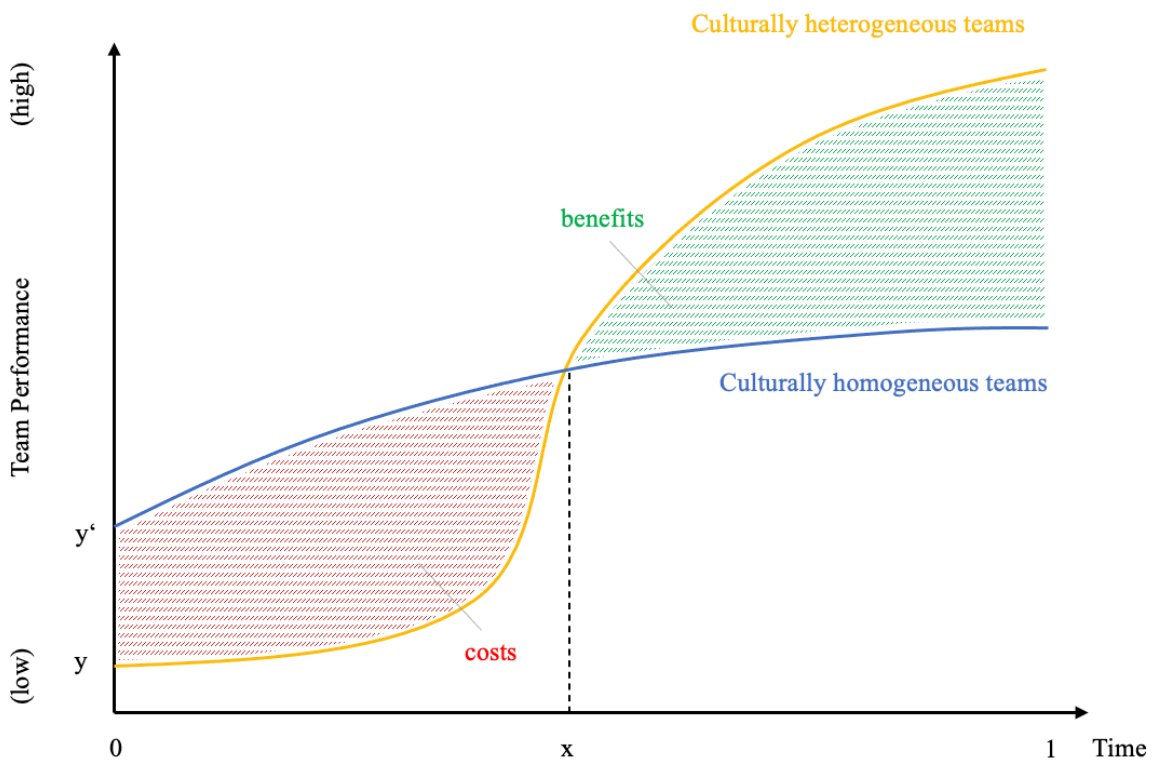


Figure 11a. Team performance of culturally homogeneous and heterogeneous units in the context of time (own work)

Figure 11b, on the other hand, shows a situation of strong performance in culturally homogeneous teams. An adaptation process of culturally heterogeneous teams would cause too high costs in the relevant timeframe compared to the possible benefits, which is why homogeneous teams lead to a higher performance seen over the entire timeframe in this context.

However, the relevance of culturally diverse teams increases with increasing innovation orientation. Based on the results according to unit orientation, it can be argued that the blue line of culturally homogeneous teams at $t=0$ on the Y-axis moves upward with increasing operational activity and downward with increasing innovative activity. The same principle applies to the yellow line of culturally heterogeneous teams, but in reverse. As innovation orientation grows, the yellow line on the Y-axis moves upwards and raises the potential benefit. This relationship can be seen in figure 11c. A decisive criterion for team composition in the context of operational or innovative units should therefore be the tradeoff between

costs and benefits. If costs > benefits, a culturally homogeneous team should be preferred. At this point, it should be mentioned that other potential drivers of cognitive diversity such as age or gender diversity are not considered in this model. However, it can be assumed that these dimensions of diversity also have a positive effect on team performance, although not as much as CD, especially in innovative units, which are equally associated with lower costs due to adaptation and coordination. Operational units in this study in particular reported high gender and age diversity, which leads to the assumption that such compensation for CD also takes place in practice.

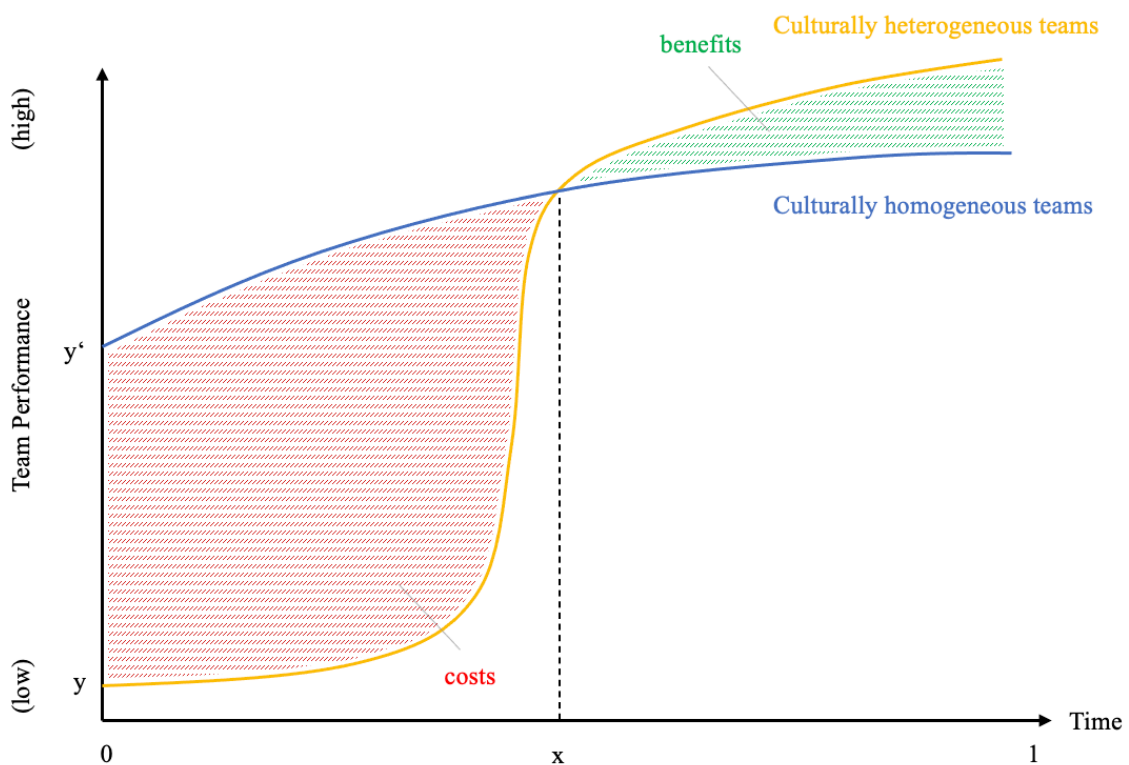


Figure 11b. Team performance of culturally homogeneous and heterogeneous units in the context of time (own work)

Figure 11d, on the other hand, illustrates a situation in which the adaptation phase is accelerated. The breakeven point x is therefore shifted forward in the context of time. This change can be achieved through the development of personal competencies on the part of employees and managers, such as cultural awareness and CQ, as well as inclusive measures. Various dimensions of inclusion can therefore lead to faster adaptation and thus to a great

excess of benefits in the cost-benefit tradeoff, especially in a culturally heterogeneous environment.

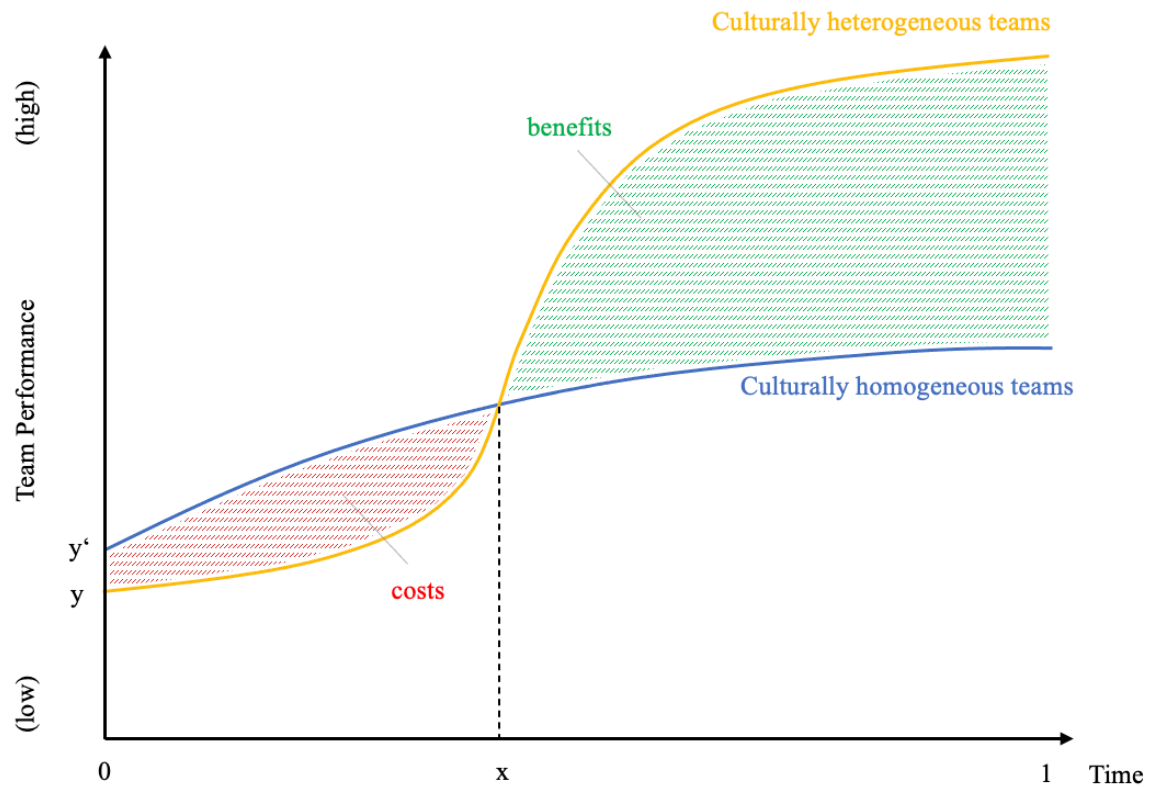


Figure 11c. Team performance of culturally homogeneous and heterogeneous units in the context of time (own work)

Consequently, inclusion has the potential to positively influence organizational outcomes, especially in an innovative context. In addition, it can be assumed that, through long-term implementation of inclusion, diverse teams will develop these cultural competencies, leading to consistently high team performance even in the face of high fluctuation. Due to deep-level beliefs and existing cultural differences, an adjustment phase and associated costs remain, but these can be significantly reduced.

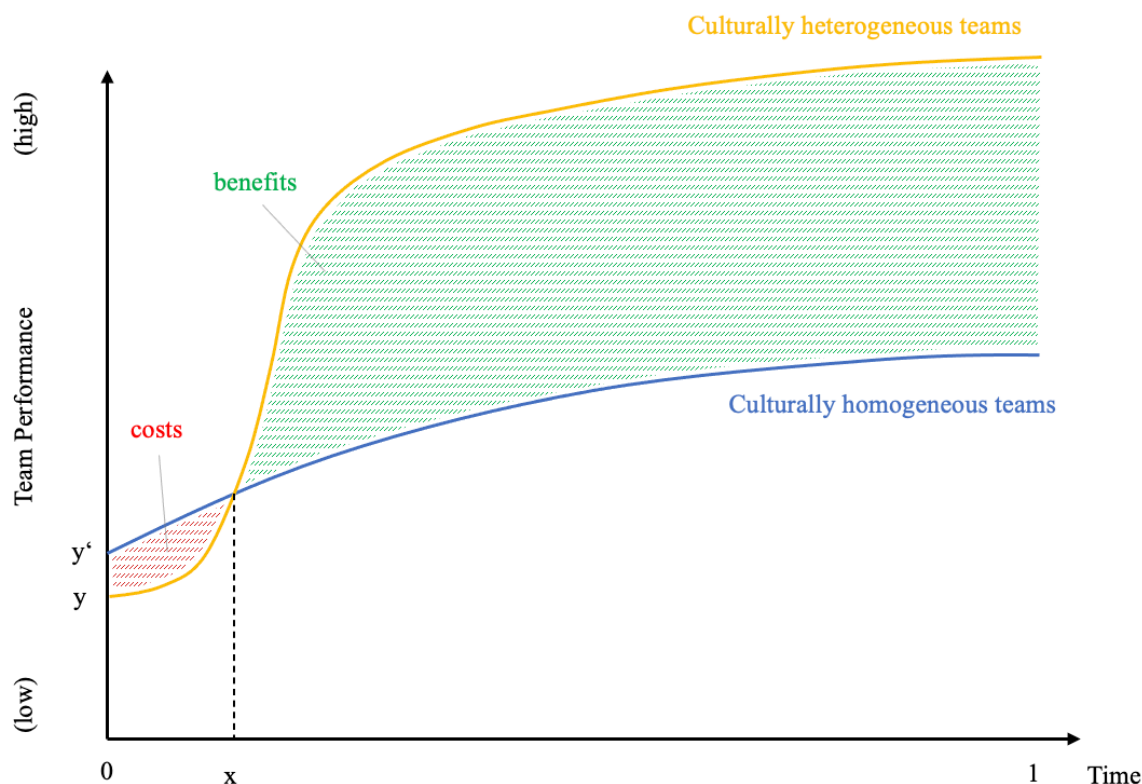


Figure 11d. Team performance of culturally homogeneous and heterogeneous units in the context of time (own work)

Innovation performance

As shown in figure 6 (p. 63), diversity represents a cost-benefit tradeoff. According to this model by Seo et al. (2020), which serves as the basis for the following concept, a moderate level of cultural diversity leads to the maximum innovation performance of an OEM in the German automotive industry due to the distinction between knowledge creation and knowledge integration in the context of PACAP and RACAP.

In the following, figure 12a and figure 12b illustrate the same relationship.

Due to the equally important role of knowledge creation and knowledge integration in innovation performance, innovative and operational units are equally important in the initial setting. As can be seen from figure 12a, the blue line 'innovation performance (1)' starts in y and has its peak as a reversed U-shape of innovation performance at a moderate level of cultural diversity. This results from the equally required operational activity, where

homogeneous teams show stronger performance, and innovative roles, where heterogeneous teams show stronger performance.

As can be understood from the findings, the impact of inclusion increases with increasing cultural diversity and consequently increasing innovation orientation. Operational units also benefit from inclusive measures, but due to fewer cultural differences, values and core beliefs, an initially higher degree of cohesion is achieved in operational units. The green line 'Impact of Inclusion' shows this proportional relationship.

The analysis of the results indicates that inclusion has the potential to exploit the potential of employees through dimensions such as 'new ideas are welcome', a strong basis of trust, good feedback and strong commitment on the part of managers, and consequently to improve innovation performance through better team performance in operational and innovative units. The yellow line 'Innovation performance (2)' shows this relationship, raising the reversed U-curve on the Y-axis. However, due to the greater impact potential of inclusion in innovative/culturally heterogeneous units, the curve flattens more slowly with increasing CD than it rises. The points y' and y'' on the Y-axis demonstrate this shift, with inclusion causing innovation performance to depend more heavily on culturally diverse units.

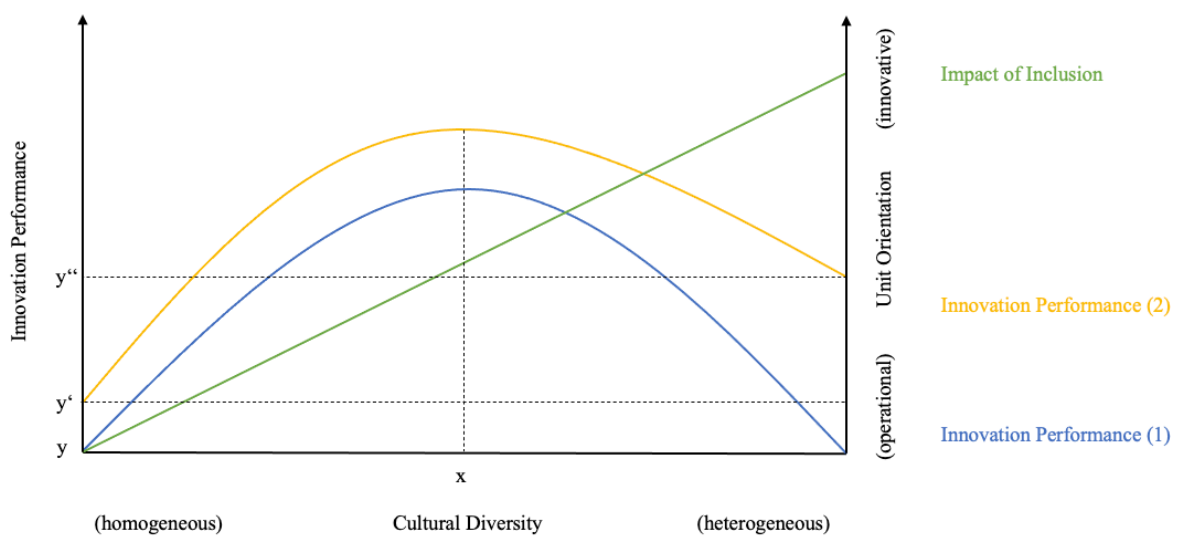


Figure 12a. Innovation performance in the context of cultural diversity and the impact of inclusion (own work)

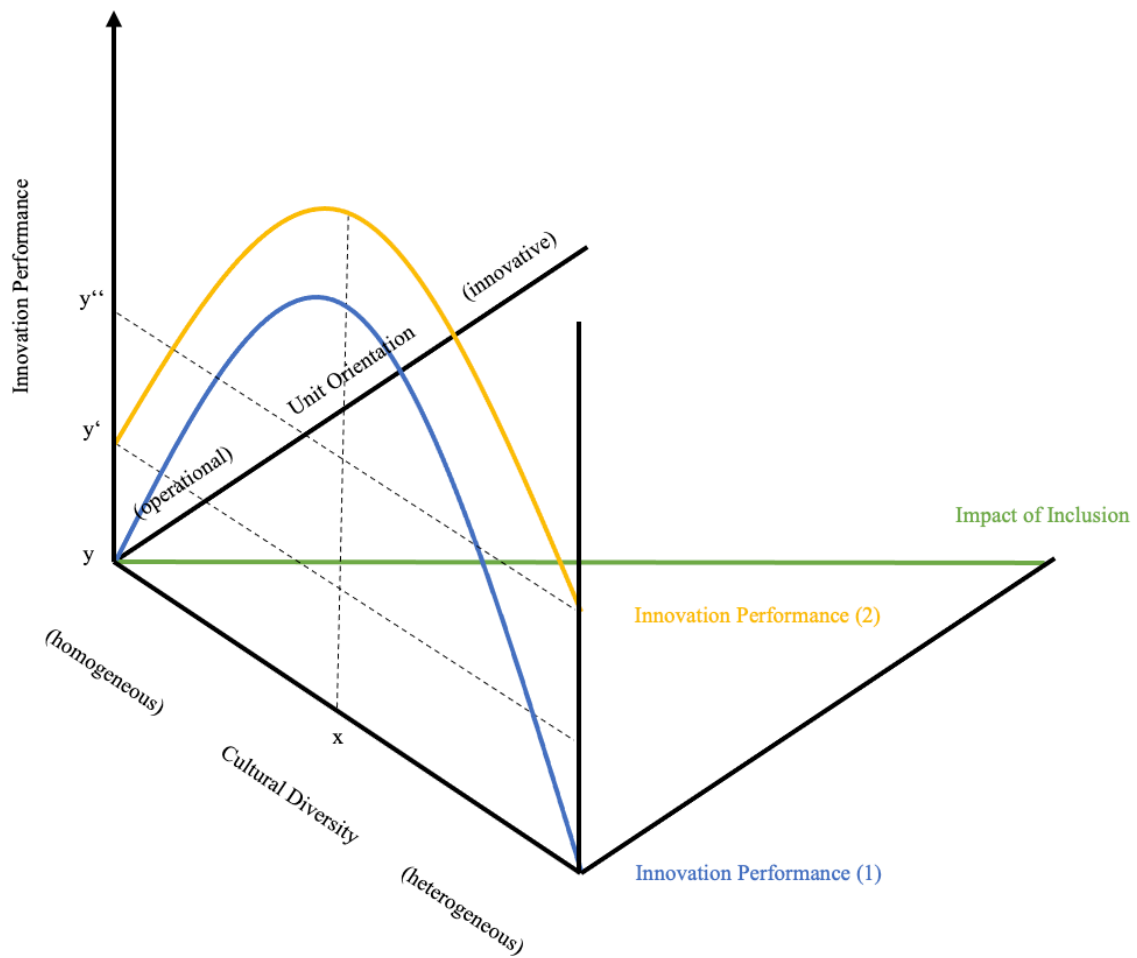


Figure 12b. Innovation performance in the context of cultural diversity and the impact of inclusion (own work)

Cultural absorptive capacity

While the analysis of the results shows the need for differentiation between unit orientation, IM Green has also provided reasons for differentiation between the automotive companies and their focal points. Green, an MNC as a supplier for high performance forged components as well as OEMs, distributes its products on international markets with international production facilities. However, it is a highly standardized product that is appropriate for customers and markets unchanged. This absence of local responsiveness therefore requires little or hardly any international R&D activities. On the contrary: due to the specific requirements with low knowledge supply and rare engineers in this area, the company is dependent on a local acquisition of expertise. This relationship is supported by strong clusters

in the area. In addition, Green is very conservative and has a strong sense of belonging to its home country.

This changed context influences PACAP according to my model extension to include CACAP. Correspondingly, Green is less receptive to CD due to a less culturally diverse context and associated weak inclusion with less pronounced social integration mechanisms.

This consideration of CACAP results in a shift of the peak for innovation performance on the x-axis in this conceptual model (figure 13a). In the case of Green with weak CACAP, the peak consequently shifts to the left in the direction of cultural homogeneity. Based on the underlying strategic orientation of the company, homogeneous teams therefore tend to be the better choice for achieving the highest innovation performance. This is accompanied by the observation of the respondents in this study that CD is not forced, but develops and establishes itself in a natural way. The intention of merely following a social or organizational trend would be counterproductive.

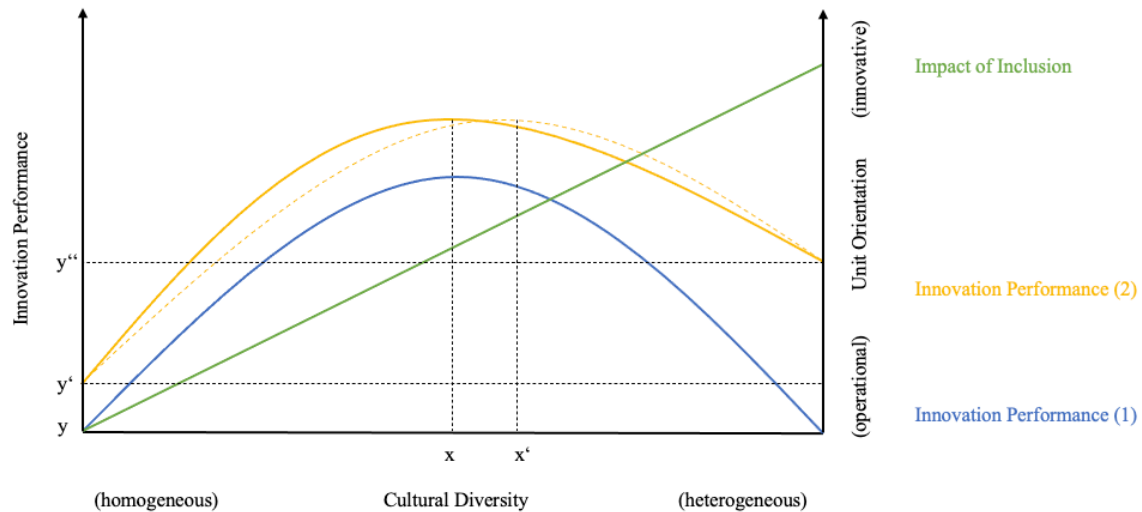


Figure 13a. Innovation performance in the context of CACAP (own work)

The shift of the peak of innovation performance from x to x' from figure 13a (dotted yellow line), on the other hand, shows the setting of a company with a high CACAP like Blue. Technology scouting is conducted on a global basis with various innovation initiatives and collaborations, and the units are as heterogeneous and international as possible. This culture-

oriented context and strong inclusion shift the peak of Blue's innovation performance on the x-axis in the direction of cultural heterogeneity.

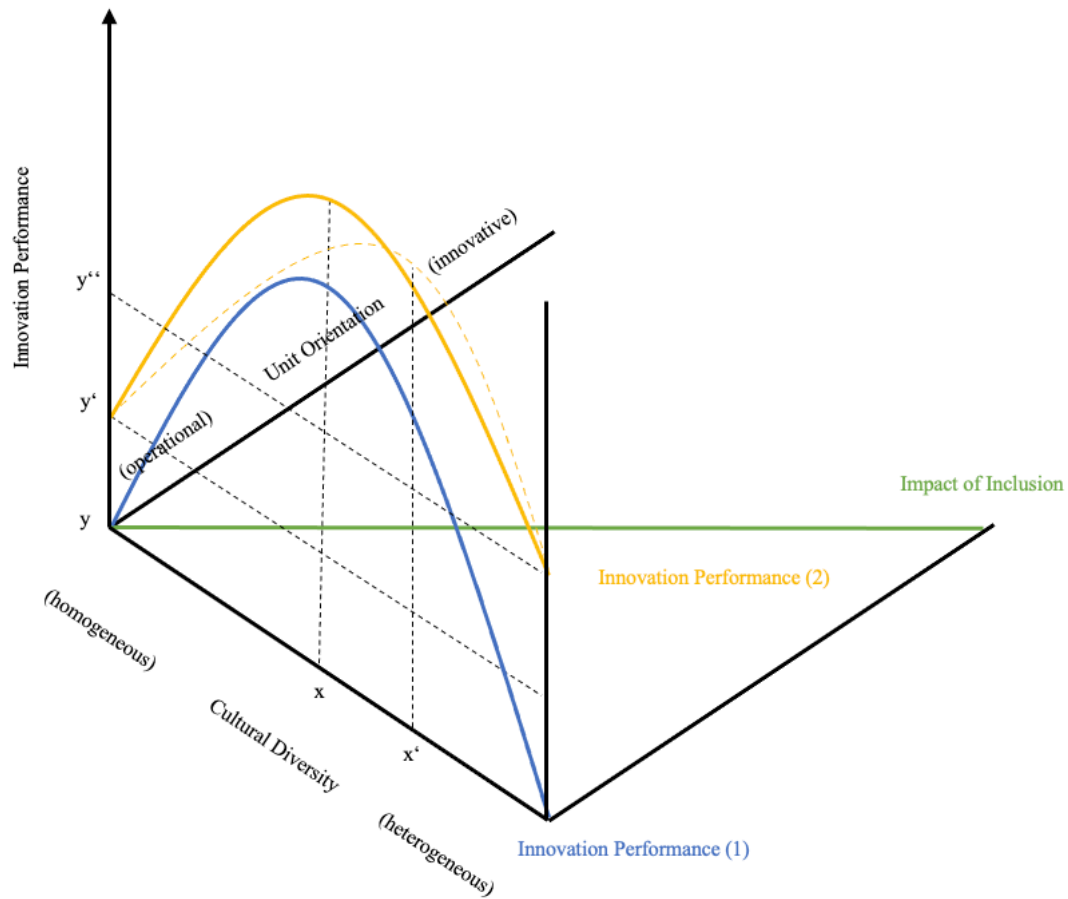


Figure 13b. Innovation performance in the context of CACAP (own work)

6. Conclusion

The aim of this thesis is to investigate the potential impact of inclusion on the relationship between cultural diversity and innovation performance in the context of unit orientation in the German automotive industry. The findings show a positive relationship between cultural diversity and the unit orientation toward innovation. Hence, innovative units are culturally more heterogeneous than operational units. Furthermore, it was found that innovative units, which are equally more culturally heterogeneous, show a higher degree of inclusion. This is due to the greater impact of inclusive dimensions on culturally diverse units, as homogeneous teams naturally generate a higher level of cohesion and harmony. However, this simultaneously reduces the range of creativity and potential innovations. It was also found that cultural diversity is accompanied by an adaptation process, which on the one hand is a natural progression, but on the other hand can be accelerated by inclusive measures. Depending on the time frame considered, which tends to be shorter in innovative units than in long-term oriented operational units due to higher fluctuation, inclusion can reduce the costs from potentially slowed processes and cross-cultural interactions and increase the benefits by developing CQ and establishing inclusive dimensions such as feedback systems, a strong basis of trust and providing a high level of participative safety. Especially in the highly dynamic and competitive environment of the German automotive industry, inclusion thus represents a valuable organizational capability for OEMs. Furthermore, the findings of this study confirm the distinction between knowledge creation and knowledge integration in the context of PACAP and RACAP and allow an extension of the model by the dimension of CACAP. Through the parameters of context and inclusion, the cultural absorptive capacity of companies influences both PACAP and RACAP and consequently has an impact on the innovation performance of corporations considered. In this context, it was also found that innovation performance is enhanced by the positive impact on both, operational and innovative units. However, inclusion was identified as having a greater impact in culturally heterogeneous units. By differentiating among units by orientation, it can be seen that cultural diversity does not have the same impact on innovation performance in every context, nor does inclusion have the same impact on this relationship in either context. Beyond the context of unit orientation, a relation to the extent of organizational orientation could be found. Using

the example of IM Green, who works in a highly innovative and culturally homogeneous unit, findings were made that the need for local responsiveness and market-specific requirements for products, the supply of a high expertise workforce and the specificity of the product as well as the underlying strategic orientation of a company can have an essential influence on CACAP. Consequently, the development of cultural intelligence and the ability and willingness to provide an inclusive work environment is likewise dependent on cultural influences as well as the corporate culture and one's own environment. Consequently, this attribute is inseparable from cultural development, highlighting the complexity of cultural influences on internal and external organizational interactions.

6.1. Implications

The practical and scientific relevance of cultural diversity management and inclusion in the context of MNCs is a much discussed area of interest. Particularly for the complexity and high dynamics of the environments of German automotive companies, a culturally diverse workforce represents great opportunities to be successful in the long term and to generate an SCA. As digitization continues to gain influence, it is primarily people who create innovations and determine success or failure. In the context of increasing cultural blending, however, legitimate negative aspects according to SAE, SCT or SIT are being further weakened. The results of this study show a great emphasis of a culturally diverse workforce in the context of forthcoming challenges.

However, the results of this work underline the importance of promoting cultural diversity with purpose and allowing it to evolve naturally. Companies in the German automotive industry need to be aware of whether the prerequisites for high CACAP and the development of CQ are in existence, or whether they are merely following a social trend. The management of people starts where people are really understood. If this understanding is missing, i.e. the ability of cultural integration or the necessity, cultural diversity may lead to conflicts, barriers and costs. As a result, companies that are constantly operating in highly global and dynamic environments and are able to exploit the potential of cultural diversity will benefit the most. Consequently, the work provides answers to the question in which units and to what extent inclusion is needed and beneficial for organizational outcomes.

The current COVID-19 pandemic further demonstrates the importance of social interaction in the workplace, which transcends work-related subjects. The context of social distancing and home office acts as an antagonist to inclusion and leads to reduced motivation and commitment. Behaviors based on cultural differences, such as unpunctuality, become more prominent as a result of the pandemic. Consequently, negative aspects of cultural differences are accelerated and fueled by a lack of inclusive measures. These implications show a high need for social integration mechanisms — especially in environments where creativity and innovation are in focus and where cultural heterogeneity is required.

6.2. Limitations & Future Research

The present thesis studies the impact of cultural diversity and inclusion on the innovation performance of relevant companies from a unit orientation perspective. In this context, this thesis provides a model extension by CACAP and a conceptual model, which represents the influence mechanisms of inclusion. However, these conceptualizations and findings are based on qualitative research. The interviewees were of high relevance and quality for this study, but in the context of qualitative research the potential shortcomings of missing validity must be considered. A generalizability to other companies or even units is also questionable. Although an attempt was made to integrate different types of operations and companies in this study to enable the best possible comparisons to be made, there is a risk that the statements made by the interviewees do not reflect the real conditions.

As already discussed in Chapter 4, there is also a risk that statements may have been made incorrectly or misinterpreted by the researcher. In principle, this form of research is subject to the interpretation of statements and findings.

An interesting research approach would be to quantitatively test the actual impact of inclusion on innovation performance in the given context. However, the barrier exists in this respect that merely about one third of all companies in the German automotive industry have implemented their own key performance indicators for the innovation performance of their respective organizations. Hence, a full mapping with quantitative research is unfeasible at this point in time.

Furthermore, the current COVID-19 pandemic gives reason to explore the impact on the work environment in the context of inclusion in more detail. This would provide further insights into the organizational ability to respond more quickly to unexpected crises and mitigate negative outcomes.

References

- Ajmera, A. (2018, June 26). *Audi partners with Israel's autonomous vehicle simulation startup Cognata*. [Online]. Available at: <<https://www.reuters.com/article/us-cognata-audi-idUSKBN1JM15X>> (accessed: 28 March 2022).
- Apfelbaum, A. & Aharon, A. (2019). *Israel Innovation Authority's 2019 Innovation Report*.
- Asheim, B. T., & Coenen, L. (2005). Knowledge bases and regional innovation systems: Comparing Nordic clusters. *Research policy*, 34(8), 1173-1190.
- Asheim, B. T., & Gertler, M. S. (2005). The geography of innovation: regional innovation systems. In *The Oxford handbook of innovation*.
- Asheim, B. T., Isaksen, A., & Tripl, M. (2019). Advanced introduction to regional innovation systems.
- Asheim, B. T., Smith, H. L., & Oughton, C. (2011). Regional innovation systems: theory, empirics and policy. *Regional studies*, 45(7), 875-891.
- Audi AG (2022a). *Audi Innovation Research* [Online]. Available at: <<https://www.audi.com/de/company/research/audi-innovation-research.html>> (accessed: 21 February 2022).
- Audi AG (2022b). Audi Report 2021. [Online]. Available at: <<https://www.audi.com/content/dam/gbp2/de/company/investor-relations/reports-and-key-figures/annual-reports/audi-report-2021.pdf>> (accessed: 14 April 2022).
- Audi AG (2019, June 17). *Innovationsmanagement bei Audi: Start-Ups meets Denkwerkstatt*. [Online]. Available at: <<https://www.audi.com/de/career/working-world/innovation-management-at-audi.html>> (accessed: 14 April 2022).
- Awad, E. M. (2007). *Knowledge management*. Pearson Education India.
- Bandura, A. (2001). Social cognitive theory: An agentic perspective. *Annual review of psychology*, 52(1), 1-26.
- Bandura, A. (2002). Social cognitive theory in cultural context. *Applied psychology*, 51(2), 269-290.
- Bandura, A. (2005). The evolution of social cognitive theory. *Great minds in management*, 9-35.
- Barnard, H., & Chaminade, C. (2011). Global Innovation Networks: towards a taxonomy. *CIRCLE Work. Pap*, 1-44.
- Barney, J. (1991). Firm resources and sustained competitive advantage. *Journal of management*, 17(1), 99-120.
- Barney, J. B. & Wright, P. M. (1998). On becoming a strategic partner: The role of human resources in gaining competitive advantage. *Human Resource Management*, 37, 31-46.
- Barney, J., Wright, M., & Ketchen Jr, D. J. (2001). The resource-based view of the firm: Ten years after 1991. *Journal of management*, 27(6), 625-641.

- Bearman, B., Mims, Z., Moone, B., & Pachlhofer, C. (2017). *Leveraging Diversity of Thought Inclusion: Advantages, Disadvantages, and Taking Advantage*. Air Command and Staff College, Air University. Research Report.
- Bell, E., Bryman, A. & Harley, B. (2015). *Business research methods*. Oxford university press.
- Bell, C., & Pospisil, J. (2017). Navigating Inclusion in Transitions from Conflict: The Formalised Political Unsettling. *Journal of International Development*, 29(5), 576–593.
- Bender, A., & Beller, S. (2016). Current perspectives on cognitive diversity. *Frontiers in Psychology*, 7, 509.
- Berret, M. (2022). *Trends in der Automobilindustrie*. [Online]. Available at: <<https://www.rolandberger.com/de/Insights/Global-Topics/Automotive-Disruption/>> (accessed: 09 May 2022).
- Berry, H., Guillén, M. F., & Zhou, N. (2010). An institutional approach to cross-national distance. *Journal of international business studies*, 41(9), 1460-1480.
- Beugelsdijk, S., Kostova, T., & Roth, K. (2017). An overview of Hofstede-inspired country-level culture research in international business since 2006. *Journal of International Business Studies*, 48(1), 30-47.
- Beugelsdijk, S., & Welzel, C. (2018). Dimensions and dynamics of national culture: Synthesizing Hofstede with Inglehart. *Journal of cross-cultural psychology*, 49(10), 1469-1505.
- Bittencourt, B. A., Galuk, M. B., Daniel, V. M., & Zen, A. C. (2019). Cluster Innovation Capability: a systematic review. *International Journal of Innovation*, 7(1), 26-44.
- BMW AG (2022a). BMW Open Innovation. [Online]. Available at: <<https://www.bmwgroup.com/de/innovation/open-innovation.html>> (accessed: 10 May 2022).
- BMW AG (2022b). BMW Startup Garage. [Online]. Available at: <<https://www.bmwstartupgarage.com>> (accessed: 10 May 2022).
- Brislin, R., Worthley, R., & Macnab, B. (2006). Cultural intelligence: Understanding behaviors that serve people's goals. *Group & Organization Management*, 31(1), 40-55.
- Brown, R. (2000). Social identity theory: Past achievements, current problems and future challenges. *European journal of social psychology*, 30(6), 745-778.
- Byrne, D. (1997). An overview (and underview) of research and theory within the attraction paradigm. *Journal of Social and Personal Relationships*, 14(3), 417-431.
- Byrne, D., Clore, G. L., & Smeaton, G. (1986). The attraction hypothesis: Do similar attitudes affect anything?.
- Chaminade, C., Lundvall, B. Å., & Haneef, S. (2018). *Advanced introduction to national innovation systems*. Edward Elgar Publishing.
- Cheng, M. (2018, June 07). *Audi Forms Partnership with Israeli Startup Cognata*. [Online]. Available at: <<https://m.futurecar.com/2441/Audi-Forms-Partnership-with-Israeli-Startup-Cognata>> (accessed: 28 March 2022).

- Chow, I. H. S. (2018). Cognitive diversity and creativity in teams: the mediating roles of team learning and inclusion. *Chinese Management Studies*.
- Chung, S. (2002). Building a national innovation system through regional innovation systems. *Technovation*, 22(8), 485-491.
- Cohen, W.M. & Levinthal, D.A. (1990). Absorptive capacity: A new perspective on learning and innovation. *Administrative Science Quarterly*, 35(1), 128–152.
- Cooper, R. G. (2008). Perspective: The stage-gate® idea-to-launch process—update, what's new, and nexgen systems. *Journal of product innovation management*, 25(3), 213-232.
- Corsaro, D., Cantù, C., & Tunisini, A. (2012). Actors' heterogeneity in innovation networks. *Industrial Marketing Management*, 41(5), 780-789.
- Costa, P. T., Jr. & McCrae, R. R. (1992). Revised NEO Personality Inventory (NEO-PI-R) and NEO Five-Factor Inventory (NEO-FFI) Professional Manual. Odessa, FL: Psychological Assessment Resources.
- Cottrill, K., Lopez, P. D., & Hoffman, C. C. (2014). How authentic leadership and inclusion benefit organizations. *Equality, Diversity and Inclusion: An International Journal*.
- Czerny, E. J., Steinkellner, P. F., & Zehetner, K. (2011). Team diversity as competitive advantage. In *Advances in Business-Related Scientific Research Conference* (pp. 7-9).
- Dätsch, C. (2016). Lena Schmitz: *Nationalkultur versus Berufskultur. Eine Kritik der Kulturtheorie und Methodik Hofstedes*. Bielefeld (transcript) 2015, 275 Seiten. *Zeitschrift für Kulturmanagement*, 2(2), 165-170.
- Di Bitonto, S. (2020). *The Automotive Industry in Germany*. [Online]. Available at: <<https://www.gtai.de/resource/blob/64100/817a53ea3398a88b83173d5b800123f9/industry-overview-automotive-industry-en-data.pdf>> (accessed: 04 April 2022).
- Doz, Y. (2011). Qualitative research for international business. *Journal of International Business Studies*, 42(5), 582-590.
- Dunlap, C. (2021, October 14). *People Power: Why Diversity And Inclusion Is The Secret To Innovation*. [Online]. Available at: <<https://www.forbes.com/sites/honeywell/2021/10/14/people-power-why-diversity-and-inclusion-is-the-secret-to-innovation/?sh=4c15c0796fc0>> (Accessed 19 April 2022).
- Earley, P. C. (1993). East meets West meets Mideast: Further explorations of collectivistic and individualistic work groups. *Academy of management journal*, 36(2), 319-348.
- Earley, P. C., & Ang, S. (2003). Cultural intelligence: Individual interactions across cultures.
- Earley, P. C., & Mosakowski, E. (2004). Cultural intelligence. *Harvard business review*, 82(10), 139-146.
- Earley, P. C., & Peterson, R. S. (2004). The elusive cultural chameleon: Cultural intelligence as a new approach to intercultural training for the global manager. *Academy of Management Learning & Education*, 3(1), 100-115.

- Etzkowitz, H., & Leydesdorff, L. (2000). The dynamics of innovation: from national systems and mode 2. to a triple helix of university–industry–government relations. *Research Policy*, 29(2), 109–123.
- Foss, K., Foss, N. J., & Nell, P. C. (2012). MNC organizational form and subsidiary motivation problems: Controlling intervention hazards in the network MNC. *Journal of International Management*, 18(3), 247-259.
- GLOBE Project (2022a). [Online]. Available at: <<https://globeproject.com/results/clusters/germanic-europe?menu=list#list>> {accessed May 02 2022}.
- Greiner, M. E., Böhmman, T., & Kremer, H. (2007). A strategy for knowledge management. *Journal of knowledge management*.
- Gupta, A. K., & Govindarajan, V. (2000). Knowledge flows within multinational corporations. *Strategic management journal*, 21(4), 473-496.
- Hall, E. T. (1976). *Beyond culture*. Garden City, NY: Anchor.
- Heine, S. J., Foster, J. A. B., & Spina, R. (2009). Do birds of a feather universally flock together? Cultural variation in the similarity-attraction effect. *Asian Journal of Social Psychology*, 12(4), 247-258.
- Hofstede, G. (2009). Geert Hofstede cultural dimensions.
- Hofstede, G. (2011). Dimensionalizing cultures: The Hofstede model in context. *Online readings in psychology and culture*, 2(1), 2307-0919.
- Hofstede, G., & Bond, M. H. (1984). Hofstede's culture dimensions: An independent validation using Rokeach's value survey. *Journal of cross-cultural psychology*, 15(4), 417-433.
- Hofstede, G., Hofstede, G. J. & Minkov, M. (2010). *Cultures and Organizations: Software 3rd of the Mind* (Rev. ed.). New York: McGraw-Hill.
- Hofstede Insights, 2022a. Country Comparison Germany. [Online]. Available at: <<https://www.hofstede-insights.com/country-comparison/germany/>> (accessed: April 17 2022).
- Hofstede Insights, 2022b. Country Comparison USA. [Online]. Available at: <<https://www.hofstede-insights.com/country-comparison/the-usa/>> (accessed: April 19 2022).
- Hofstede Insights, 2022c. Country Comparison China. [Online]. Available at: <<https://www.hofstede-insights.com/country-comparison/china/>> (accessed: April 19 2022).
- Hofstede Insights, 2022d. Country Comparison Germany and Hungary [Online]. Available at: <https://www.hofstede-insights.com/country-comparison/germany_hungary/> (accessed: April 17 2022).
- Holzer, M., Hoda, O., Glueck, J. & Karew, J. (2019, January 04). *Sourcing Innovation. New collaboration models are shaping the future of the automotive industry*. [Online]. Available at: <<https://www2.deloitte.com/us/en/insights/industry/automotive/merger-acquisition-deals-automotive-industry-transformation.html>> (accessed: 04 April 2022).
- Horwitz, S. K., & Horwitz, I. B. (2007). The effects of team diversity on team outcomes: A meta-analytic review of team demography. *Journal of management*, 33(6), 987-1015.

- House, R. J., Hanges, P. J., Javidan, M., Dorfman, P. W., & Gupta, V. (Eds.). (2004). *Culture, leadership, and organizations: The GLOBE study of 62 societies*. Sage publications.
- Huddy, L. (2001). From social to political identity: A critical examination of social identity theory. *Political psychology*, 22(1), 127-156.
- Hunt, V., Prince, S., Dixon-Fyle, S. & Dolan, K. (2020). *Diversity wins: How inclusion matters*. McKinsey & Company.
- Jansen, J. J., Van Den Bosch, F. A., & Volberda, H. W. (2005). Managing potential and realized absorptive capacity: how do organizational antecedents matter?. *Academy of management journal*, 48(6), 999-1015.
- Kahneman, D. (2002). Maps of bounded rationality: A perspective on intuitive judgment and choice. *Nobel prize lecture*, 8(1), 351-401.
- Kluckhohn, C. (1962). Universal categories of culture. In S. Tax (Ed.), *Anthropology today: Selections* (pp. 304-20). Chicago, IL: University of Chicago Press (first published 1952).
- Kochan, T. A., Bezrukova, K., Jackson, S., Joshi, A., Jehn, K. E., Leonard, D., . . . Thomas, D (2003). The effects of diversity on business performance: Report of the diversity research network. *Human Resource Management*, 42(1), 3-21.
- Kostova, T., Marano, V., & Tallman, S. (2016). Headquarters–subsidiary relationships in MNCs: Fifty years of evolving research. *Journal of World Business*, 51(1), 176-184.
- KPMG (2022). *Automotive key trends*. [Online]. Available at: <<https://automotive-institute.kpmg.de/GAES2019/megatrends-beyond-the-obvious/automotive-key-trends>> (accessed: 09 May 2022).
- Kuhnert, F., Telang, R., Liu, W. & Stürmer, C. (2018). *Five trends transforming the Automotive Industry*. [Online]. Available at: <<https://www.pwc.com/gx/en/industries/automotive/assets/pwc-five-trends-transforming-the-automotive-industry.pdf>> (accessed: 09 May 2022).
- Kutschker, M., & Schmid, S. (2010). *Internationales management*. Oldenbourg Verlag.
- Lakoff, G. (1987). *Women, fire, and dangerous things: What categories reveal about the mind*. Chicago: University of Chicago Press.
- Lubiano, H. J. D. (2019). A Qualitative Approach in Measuring Inclusion. AIR FORCE INSTITUTE OF TECHNOLOGY WRIGHT-PATTERSON AFB OH.
- Luszczynska, A., & Schwarzer, R. (2015). Social cognitive theory. *Fac Health Sci Publ*, 225-51.
- Mårtensson, M. (2000). A critical review of knowledge management as a management tool. *Journal of knowledge management*.
- Martin, R., Aslesen, H. W., Grillitsch, M., & Herstad, S. J. (2018). Regional innovation systems and global flows of knowledge. In *New avenues for regional innovation systems-theoretical advances, empirical cases and policy lessons* (pp. 127-147). Springer, Cham.

- Mayring, P. (2007, September). Generalisierung in qualitativer Forschung. In *Forum Qualitative Sozialforschung* (Vol. 8, No. 3, p. 26).
- Mello, A. L., & Rentsch, J. R. (2015). Cognitive diversity in teams: A multidisciplinary review. *Small Group Research*, 46(6), 623-658.
- Miller, C. C., Burke, L. M., & Glick, W. H. (1998). Cognitive diversity among upper-echelon executives: implications for strategic decision processes. *Strategic management journal*, 19(1), 39-58.
- Minbaeva, D., Pedersen, T., Björkman, I., Fey, C. F., & Park, H. J. (2003). MNC knowledge transfer, subsidiary absorptive capacity, and HRM. *Journal of international business studies*, 34(6), 586-599.
- Minkov, M. (2007). What makes us different and similar: A new interpretation of the World Values Survey and other cross-cultural data. Sofia, Bulgaria: Klasika i Stil.
- Mitchell, R, B Boyle, R O'brien, A Malik, K Tian, V Parker, and V Chiang (2017). Balancing cognitive diversity and mutual understanding in multidisciplinary teams. *Health Care Management Review*, 42(1), 42–52.
- Mitchell, R., Nicholas, S., & Boyle, B. (2009). The role of openness to cognitive diversity and group processes in knowledge creation. *Small Group Research*, 40(5), 535-554.
- Mullen, B., Brown, R., & Smith, C. (1992). Ingroup bias as a function of salience, relevance, and status: An integration. *European journal of social psychology*, 22(2), 103-122.
- Mytelka, L., & Farinelli, F. (2000). Local clusters, innovation systems and sustained competitiveness. *UNU/INTECH Discussion Paper*, (2005).
- Nickols, F. (2000). The knowledge in knowledge management. *The Knowledge Management Yearbook*, 2000–2001, 12, 21.
- Nowak, R. (2020). The effects of cognitive diversity and cohesiveness on absorptive capacity. In *Managing Knowledge, Absorptive Capacity and Innovation* (pp. 311-333).
- Parsons, T. & Shils, E. A. (1951). *Toward a general theory of action*. Cambridge, MA: Harvard University Press.
- Philips, T. (2019, December 06). List of carmaker R&D centers in Israel. [Online]. Available at: <<https://www.automotive-iq.com/autonomous-drive/articles/list-of-carmaker-rd-centers-in-israel>> (accessed: 10 May 2022).
- Piekkari, R., & Welch, C. (2006). Reflections on using qualitative research methods in international business. *Liiketaloudellinen aikakauskirja*, 4, 565.
- Porter, M. E. (1998). *Clusters and the new economics of competition* (Vol. 76, No. 6, pp. 77-90). Boston: Harvard Business Review.
- Porter, M. E. (2008, January). Clusters, innovation, and competitiveness: New findings and implications for policy. In *Presentation given at the European Presidency Conference on Innovation and Clusters in Stockholm* (Vol. 23).

- Prim, A. L., Amal, M., & Carvalho, L. (2016). Regional cluster, innovation and export performance: an empirical study. *BAR-Brazilian Administration Review*, 13.
- Raimo, N., Zito, M., & Caragnano, A. (2019). Does national culture affect integrated reporting quality? A focus on GLOBE dimensions. In 9th International Symposium on Natural Resources Management, May 31st, 2019, Zaječar, Serbia (pp. 383-392). Belgrade: Megatrend University.
- Reinert, H., & Reinert, E. S. (2006). Creative destruction in economics: Nietzsche, Sombart, Schumpeter. In *Friedrich Nietzsche (1844–1900)* (pp. 55-85). Springer, Boston, MA.
- Reynolds, A., & Lewis, D. (2017). Teams solve problems faster when they're more cognitively diverse. *Harvard Business Review*, 30, 1-8.
- Riederle, S. & Bernhart, W. (2021, March 23). *E-Mobility Index 2021*. [Online]. Available at: <<https://www.rolandberger.com/de/Insights/Publications/Elektromobilität-boomt-trotz-Pandemie.html>> (accessed: 09 May 2022).
- Roberson, Q. M. (2006). Disentangling the meanings of diversity and inclusion in organizations. *Group & Organization Management*, 31(2), 212-236.
- Röbken, H., & Wetzel, K. (2017). *Qualitative und quantitative Forschungsmethoden*. Carl von Ossietzky Universität.
- Schneider, J., & Eckl, V. (2016). The difference makes a difference: Team diversity and innovative capacity.
- Seltmann, A. (2021). Audi in China. [Online]. Available at: <https://audiodiagnosticcenter-a.akamaihd.net/system/production/uploaded_files/20586/file/36b51bc56a70cf706ca9213a615a3bf66c635a02/Audi_in_China_2021_DE.pdf?1647508960> (accessed: 07 May 2022).
- Seo, E., Kang, H., & Song, J. (2020). Blending talents for innovation: Team composition for cross-border R&D collaboration within multinational corporations. *Journal of International Business Studies*, 51, 851-885.
- Shaffer, M., & Miller, G. (2008). Cultural intelligence. *Handbook of cultural intelligence: Theory, measurement, and applications*, 107.
- Sherrerd, K. (2019). *How Culture Improves Outcomes: Cognitive Diversity*. [Online]. Available at: <<https://blogs.cfainstitute.org/investor/2019/04/16/how-culture-improves-outcomes-cognitive-diversity/>> (accessed: 30 March 2022).
- StartUs Insights (2022). *Top 10 Mobility Trends & Innovations in 2022*. [Online]. Available at: <<https://www.startus-insights.com/innovators-guide/top-10-mobility-industry-trends-innovations-in-2021/>> (accessed: 09 May 2022).
- Stets, J. E., & Burke, P. J. (2000). Identity theory and social identity theory. *Social psychology quarterly*, 224-237.
- Tajfel, H. (1981). *Human groups and social categories*. Cambridge: Cambridge University Press.

- Taylor, A. (2018, July 08). *Auto Industry Innovation, Collaboration and Transformation*. [Online]. Available at: <https://www.tradeandindustrydev.com/industry/automotive/auto-industry-innovation-collaboration-and-14170>> (accessed: 04 April 2022).
- Thomas, D. C., Elron, E., Stahl, G., Ekelund, B. Z., Ravlin, E. C., Cerdin, J. L., ... & Lazarova, M. B. (2008). Cultural intelligence: Domain and assessment. *International Journal of Cross Cultural Management*, 8(2), 123-143.
- Teece, D.J. (2014) “A dynamic capabilities-based entrepreneurial theory of the multinational enterprise.” *Journal of International Business Studies*, 45: 8-37.
- Trepte, S. (2013). Social identity theory. In *Psychology of entertainment* (pp. 273-290). Routledge.
- Tung, R. L. (2008). The cross-cultural research imperative: The need to balance cross-national and intra-national diversity. *Journal of International Business Studies*, 39(1), 41-46.
- Turner, J. C., Hogg, M. A., Oakes, P. J., Reicher, S. D., & Wetherell, M. S. (1987). *Rediscovering the social group: A self-categorization theory*. basil Blackwell.
- Uzuka, N. & Gullapalli, R. (2019). Next-Gen R&D for Auto Industry. [Online]. Available at: https://www.accenture.com/_acnmedia/pdf-105/accenture-apac-industrial-auto-uzuka.pdf> (accessed: 04 April 2022).
- van Dyne, L., Ang, S., & Tan, M. L. (2016). Cultural intelligence.
- van Knippenberg, D., De Dreu, C. K. W., & Homan, A. C. (2004). Work group diversity and group performance: An integrative model and research agenda. *Journal of Applied Psychology*, 89, 1008-1022.
- Vinney, C. (2019). *Social Cognitive Theory: How We Learn From the Behavior of Others*. [Online]. Available at: <https://www.thoughtco.com/social-cognitive-theory-4174567>> (accessed: April 29 2022).
- Völzow, C., Lichtblau, K. & Albert, F. (2021). *Auto-Cluster Bayern. Entwicklung und Zukunftsperspektiven*. [Online]. Available at: <https://www.vbw-bayern.de/Redaktion/Frei-zugaengliche-Medien/Abteilungen-GS/Wirtschaftspolitik/2021/Downloads/Studie-Auto-Cluster-Bayern-März-2021.pdf>> (accessed: 04 April 2022).
- Watson, W. E., Kumar, K., & Michaelsen, L. K. (1993). Cultural diversity's impact on interaction process and performance: Comparing homogeneous and diverse task groups. *Academy of Management Journal*, 36, 590–602.
- Winkler, V. A., & Bouncken, R. B. (2011). How does cultural diversity in global innovation teams affect the innovation process?. *Engineering Management Journal*, 23(4), 24-35.
- Yang, Y., & Konrad, A. M. (2011). Understanding diversity management practices: Implications of institutional theory and resource-based theory. *Group & Organization Management*, 36(1), 6-38.
- Zahra, S. A., & George, G. (2002). Absorptive capacity: A review, reconceptualization, and extension. *Academy of management review*, 27(2), 185-203.

Appendix

Interview Guide

General Questions

1. Are you okay with this interview being recorded by audio?
2. Do you wish to be identified by name or remain anonymous?

Demographic and Ethnographic Background

3. Please tell me about yourself.
 - ▶ Name
 - ▶ Gender
 - ▶ Age
 - ▶ Education
 - ▶ Nationality
 - ▶ Languages
4. How would you describe your current social status and how does it differ from when you were growing up?
5. Please tell me about your experiences abroad.

Working Environment

6. At which employer and in which function are you currently employed?
7. How would you describe your role in your company? Please describe your main duties and responsibilities.

8. Based on this, would you consider your job to be more operational or innovative? Please give reasons.
9. Do you have regular contact with international units or external partner companies abroad?
10. How would you rate your activity in terms of regional focus (local vs global)?
11. Please tell me about your team.
 - ▶ Team size
 - ▶ Staff turnover
12. Do you perceive that you work better with some colleagues? What is the reason for this?

Culture and Diversity

13. Please tell me about your understanding of cultural diversity.
14. Please specify if you perceive any potential benefits or disadvantages in this for the productivity and success of your work.
15. How culturally diverse do you feel your work environment is?
 - ▶ Demographics and ethnographies
 - ▶ Value system
 - ▶ Possible differences from yourself?
16. How diverse do you perceive your work environment in terms of technical expertise (experience, education, role etc.)?
17. What are the main conflicts and difficulties you face in your work environment?
18. Do you feel motivated and committed to the team? Please elaborate.

Inclusion

19. How do you define an inclusive work place?
20. What is important to you about an inclusive environment? Are there any measures that may already be available to your team?
21. Is cultural diversity and inclusion actively promoted by your supervisor in your functional area?
22. What characteristics would you attribute to your work environment in terms of inclusion?
23. Please elaborate on whether you perceive that an inclusive work environment in your role contributes to the success of the company.

Quotations

Unit orientation

	Identification	Quotes
1	Project Manager Red (1)	"It's more operational, but it's also innovative for me, because of course I also want to help shape the products [...]." "Yes, unfortunately there is now a very hard separation of roles. "Ideas have to come from sales", that kind of thing, and the others implement and accept it that way, no matter what sales says."
2	IT Consultant Gold	"In the agile environment and in software development, innovation or innovation engineering is always a very big component."
3	Project Manager Red (2)	„Operational, unfortunately. It'd be nice to be more innovative but it's very much operational. You have a task and it's implementing that task. It's not defining the task.“
4	Salesperson Red	"[...] but at the end of the day, I'm more involved in operations with implementation."
5	Engineer Silver	" More innovative. Definitely."
6	Head of Project Management Red	"The straight activity is more operational, it's more about administration. However, we also have some projects that are very early in the phase, i.e., they are rather special projects that we have. Of course, they are very innovative. That is, from my point of view, very mixed in my case. I have some innovative topics, but I also have some very straight operational topics."
7	Innovation Manager Blue	"I would say both, but clearly innovative in terms of orientation." "Because I've been very much involved with autonomous vehicles and mobility concepts of the future. I'm kind of zoned in with potential startups that have, for example, new radar systems, new mobility solutions trying to get off the ground."
8	Product Manager Silver	"It's already a mixture of both, because of course you always say strategically what we need and so. But of course it's also a lot of operational, helping. I would say about two-thirds operational and one-third innovative." "We say from the customer's point of view what the customer needs, what he still wants, what doesn't work, what the markets generally want, in which direction we have to develop it further."
9	Head of Racing Black	"We need a high level of operational quality to compete against the other factory teams." "But motorsport is simply characterized by innovation or further development. I.e., when we race, it's actually at the next race or it's already in everyone's mind during the race or after the race: 'What do we have to do next time?' So it's actually a linkage."
10	Innovation Manager Green	"And when I think about the accelerator, the family business accelerator, then of course it was a lot of pioneering work at the beginning. There you also have to drive it massively again, but then of course at some point it goes very much into the operational."

Team composition

	Identification	Quotes
1	Project Manager Red (1)	<p>"I naturally get along better with some, worse with some. That's logical. For one thing, it's really the time, how long you've been working together. That's beneficial, I'd say. But also, of course, whether you have similar views. Also how you approach things and whether you have more of a pessimistic or a positive basic attitude."</p> <p>"[...] if I know what kind of views a person has, then I also know how to deal with them."</p>
2	IT Consultant Gold	<p>"Regarding the dynamics in the team: This is actually already very dynamic in contrast to a conventional waterfall model. [...] in the consulting area we also have a lot of possibilities and the employee, depending on the experience level, can also decide for himself which project he wants to go into."</p> <p>"I can say that in the last five months, we have changed six team members."</p> <p>"But in the long run, a team change like that can be very helpful. Just for motivation reasons or if there's social friction, that you solve that through that. Or for competence reasons."</p> <p>"There are definitely colleagues I get along with much better and some I would already like to avoid. [...] I think it's simply because you have common interests, maybe even a common origin. That doesn't even have to be cultural, it can also be that you come from northern Germany, for example, or perhaps in your case from the Rhine-Main area."</p>
3	Project Manager Red (2)	<p>„When you start to see the team changing regularly, it becomes very difficult to work together because you always have through that process of storming, norming, then performing. But it's always the storming and norming before you get to the performing. And it's tough.“</p> <p>„(...) staying within the project between three and four years. That tends to be the level of consistency [at Red].“</p> <p>„It's not like after six months, there's a whole new team working for some project.“</p> <p>„If you could keep your team together between feasibility and start of production, that would be ideal.“</p>
4	Salesperson Red	<p>"It's just that in the last few years we've always had a reorganization and at the moment, so currently because of the cost pressure and the development by CORONA, we have a very big reorganization with a lot of movement, also departures."</p>
5	Engineer Silver	<p>"Aerodynamics, because it's a very special topic, and it's also a lot about information security. So especially when you move from one company to another, it's also common that you get a three-month lockout. Yes, that's why people don't fluctuate back and forth like that."</p>
6	Head of Project Management Red	<p>"[...] but it's with people who are similar to you, that fits better from the ground up. You know that and when you know that, it's easier for someone, of course. That's the way it is. And people who think similarly, you like them more at first."</p>
8	Product Manager Silver	<p>"Actually, it's so normal that team members stay with the team for three years like that and then look for something else."</p> <p>"There is actually a general culture within Silver that you should get to know a lot and that you should get to know a lot of perspectives and that you can then bring all these perspectives that you have gathered with you into the next job, so that everything always develops further there."</p>

Regional orientation

	Identification	Quotes
1	Project Manager Red (1)	"Overall, I have almost no contact at all outside the concern. More with sales and the engineering and development department."
2	IT Consultant Gold	"Definitely global. If we look at the IT language Java, it is spoken in the same way all over the world. In my opinion, that is a very big benefit that IT has there. That is also reflected in various projects that we have. All the software we produce for car manufacturers in southern Germany, we also produce for a well-known car manufacturer in the Czech Republic."
3	Project Manager Red (2)	„It really depends on the project“
4	Salesperson Red	"I have intensive exchange with colleagues or - yes, mainly with the sales units abroad." "This includes China, USA, Europe [...] but also with South America, [...] and Mexico."
6	Head of Project Management Red	"We pull some parts now from our new project, for example, from a plant in Poland. Other parts from Kassel. For us, it's international here at the site. Of course, some German manufacturers, but also some German manufacturers who also produce abroad. We have interfaces there as well."
7	Innovation Manager Blue	" We get all the requests that come from abroad, have to be approved once by us. We're involved in that every day. But we also have start-up scouting ourselves, which I even do."
10	Innovation Manager Green	"[...] we as Green have certain competencies, that is manufacturing and forging." "[...] if you develop a new AI that is specifically designed to test the quality of forged components using light field imaging. Yes, then you go around on the street in the pedestrian zone and ask if anyone wants to join in." "[OEMs] that look completely internationally and are also open to many, many more topics there. They have eight, nine different fields where they are looking."

Unit diversity

	Identification	Quotes
1	Project Manager Red (1)	"So, culturally, diverse is of course first of all (...) we don't have that so much. You have to say that as well. On a scale of one to ten, about three to four." "[...] if you have, for example, a woman in the team, then it is quite different than if there are only all the men, the climate is already quite different. That is definitely important."
2	IT Consultant Gold	" Thinking about it now, we have a Bosnian colleague, one from Spain, me with Turkish roots, a colleague from Ghana, one from Israel and three German colleagues. I would say we're maximally cultural along the way." "We are a multicultural team and a multicultural business unit. We are open to new areas of expertise and to new competencies."
3	Project Manager Red (2)	„ If you count Schwaben (engl. Swabians) and Bayern (engl. Bavarians) as different cultures, then yeah [laughs]. I'm probably the most diverse there, but we have a good mixture of women, we have a good mixture of young and old. I think I'm the only foreigner.“ „Look, at Red, we're a company of engineers for engineers. (...) Audi basically thinks that you can put an engineer into any department and they'll be okay. (...) So we tend to be pretty similar in a lot of cases.“
4	Salesperson Red	"Currently, we have colleagues from Peru and one colleague remotely from Iran."
5	Engineer Silver	"[The work environment] was actually culturally diverse. We didn't have any women on the team. That much up front. But that's probably generally the case in engineering. [...] But we had colleagues from Bali, from Argentina, from Bolivia. Basically, there were more colleagues with foreign backgrounds in our team than German colleagues.“ "They all have mechanical engineering degrees. Actually, all but two of them have PhDs in aerodynamics. It's all very similar."
6	Head of Project Management Red	"[...] they are actually all Hungarians. Whereas most of us have had some experience abroad somewhere and have either been to Germany or some are from Mexico as well.“ "You can tell it's extremely noticeable in the people. Those who have already had to deal with other cultures, who have also lived in other cultures, they also act and react completely differently.“ "We're really completely from different disciplines." "And from my point of view, especially in project management, that's extremely important.“ „At the lower management levels, there are an incredible number of women coming up and incredibly really strong and great women who are really making massive strides there."
7	Innovation Manager Blue	"[...] by the fact that we work all the time with the offices abroad and I consider that as one, I would already say that we are very diverse." "If you have a German last name there, you are even almost sometimes the only one, I thought that was really crazy. And I think that's good too, because you try to bring bright minds from all over the world together somewhere, good ideas emerge.“ "We have a lot of engineers as a background, which is mechanical engineering, then we even have electrical engineering and then we have a communications officer and then just me with business administration and psychology."

	Identification	Quotes
8	Product Manager Silver	"[...] the [units] were rather homogeneous. Most of the teams we had, they're actually all from the academic environment, you can say that." "It would certainly have been even more productive if we had been more diverse."
9	Head of Racing Black	"The most international squad is the engineers." "If I go through our pit-set now, I have a Frenchman, an Englishman, an Irishman and a Belgian sitting in front. If I go through the back office, where the other engineers sit, there's a Frenchman, an Argentinean, a German, another German, another Frenchman." "[...] all colleagues from other European countries with the Argentinean as an exception." "[...] The proportion of foreigners in the engineering area is 70% and the proportion of foreigners in the mechanics area is 20%."
10	Innovation Manager Green	"It's still a very traditional industry, so you don't have much diversity. It's really all very homogeneous there." "Especially here in southern Germany, the companies have just grown like that." "[...] because it is the largest employer in my home region. I already have a strong connection with it."

Cultural differences

	Identification	Quotes
1	Project Manager Red (1)	<p>"There it is really a cultural conflict. Not because of any beliefs, but between two nationalities. [...] Turkish and German."</p> <p>"The German is also the workhorse and so I see the attitudes collide, how do I meet deadlines and stuff like that, that is already a bit different from my point of view."</p> <p>"Bureaucracy is just gross. [...] I don't think Tesla works the way we do."</p>
3	Project Manager Red (2)	<p>„(...) and as a Canadian I feel very comfortable within the German system. I fit in and I understood "Okay, this is the health care system and this is how that works and that's how this works". There was no great shock. It was all very much what I was used to in Canada“.</p> <p>„I think Germany in general is pretty inclusive. You don't get a lot of people in Germany coming and giving you a hug on your first day“</p> <p>„But if you're looking for people that are really solid, if you're looking for people that are really willing to make a long term commitment to getting to know you, then Germany is a pretty inclusive place.“</p>
4	Salesperson Red	<p>"With China or Japan [...] even if you have seen each other, they tend to nod, but in the end you often mean something completely different. As this direct communication, or this expression of facts or, or factual situations, that is handled differently - I think - yes. It's not always that easy."</p>
6	Head of Project Management Red	<p>"[...] the Hungarians are incredibly human. The human level is much more important to them than the technical level."</p> <p>"The people are really very very motivated and very very much on the way to implement certain things. But it has to work on the human level, on the relationship level. That's incredibly important in Hungary. It's a little bit different than in Germany.“</p> <p>"Hungarians are always very cautious about people higher up in the hierarchy."</p>
7	Innovation Manager Blue	<p>"I find it very interesting with the customers themselves, i.e. with the startups, it's really crazy to see how different certain regions of the world [are]."</p> <p>"[...] keeping certain times. We had an incident the other day where we were talking about a big contract and the person was 15 minutes late and didn't apologize either. That was actually a no-go for us and that was quite normal for them, for example. [...] from the Middle East.“</p> <p>"We have a female employee and then with her it was like, 'Yeah, bring on the boss.' And then she was like, 'I'm the boss.' She was like, 'No, I don't want that, bring the real boss.' And then the conversation was also broken off very quickly."</p>
8	Product Manager Silver	<p>"The first thing you do with Australians is chat for ten minutes: ‚How are you doing? How was the holiday?‘. And with the Koreans, you might get to the topic more quickly.“</p> <p>"But I also tend to think that people are more likely to treat their colleagues with respect if they know that there is a different cultural background. I do have that feeling."</p>
9	Head of Racing Black	<p>"Whether a German, a Frenchman or an Englishman works together [...] the cooperation is hardly noticeable from the cultural background, because I say, the culture of the Germans, Frenchmen, which we have just all in the team, so all yes Europeans yes actually, is hardly different."</p>

Conflicts due to cultural differences

	Identification	Quotes
1	Project Manager Red (1)	<p>"There it is really a cultural conflict. Not because of any beliefs, but between two nationalities. [...] Turkish and German."</p> <p>"The German is also the workhorse and so I see the attitudes collide, how do I meet deadlines and stuff like that, that is already a bit different from my point of view."</p> <p>"Bureaucracy is just gross. [...] I don't think Tesla works the way we do."</p>
2	IT Consultant Gold	<p>"In my opinion, the biggest potential for conflict is the language. But that is also within limits, because in the environment where I currently find myself, English is taken for granted [...]."</p>
3	Project Manager Red (2)	<p>„I've seen linguistic problems. I had a lot of those myself. (...) So you have to kind of move a little bit towards the people there. I made the decision to come to Germany. I have to adapt.“</p> <p>„(...) external forces that affect how your team works. If there's a lot of stress on the team, that's a very negativ effect on how you work together.“</p> <p>„(...) timing or resource constraints.“</p>
4	Salesperson Red	<p>"Actually so little problems. Sometimes you still have language barriers that not everyone understands that so also correctly what is meant."</p> <p>"With the foreign units, of course, you realize that when you're dealing with Japan or China, you also subliminally realize a bit that they work differently. Also how you have to write or interact with them.“</p>
5	Engineer Silver	<p>"The colleagues all studied here in Germany. Accordingly, they could also speak German well. Accordingly, there were then no language barriers, perhaps minor things.“</p> <p>"Conflicts then tended to arise with neighboring departments. For example, if you need components at 6 p.m. for the measurement that is due at 6 a.m. the next day."</p>
6	Head of Project Management Red	<p>"Hungarians are always very cautious about people higher up in the hierarchy.“</p> <p>"And you can see that you have to be very attentive with the Hungarians and how you deal with them. That is actually the biggest challenge for me here, to be honest. Getting people to talk openly, because they simply don't dare to some extent.“</p> <p>" [...] the added value from diversity and from the other approaches, from the other ways of doing things is so much higher than the little bit where I have to speak a little bit slower now, where I have to ask maybe one, two times more.“</p> <p>"[...] project managers are at the center of a certain conflict field, where resources or interests are being fought over."</p> <p>"We actually have the approach of finding the best solution for the company as a whole, even if individual interests may have to take a back seat at times."</p>
9	Head of Racing Black	<p>"Whether a German, a Frenchman or an Englishman works together [...] the cooperation is hardly noticeable from the cultural background, because I would say that the culture of the Germans, Frenchmen, which we just all have in the team, so all yes Europeans yes actually, is barely different."</p> <p>"No cultural conflicts."</p>

Perceived inclusion

	Identification	Quotes
1	Project Manager Red (1)	<p>"Of course, everyone can voice their opinion and everyone is welcome to say what they want - a very open culture, we already have that."</p> <p>"There is now feedback on the boss. There's a monthly round, I'll say now, where you can discuss everything in pairs. That's quite good, and it's also new now."</p> <p>"My nature is relatively inclusive. Because I just get along with everyone. There's actually never anyone with whom I really quarrel. I have the position that I understand the others and I'm already responsive to everyone."</p>
2	IT Consultant Gold	<p>"I am very motivated to work in the team [...]. We have a very flat hierarchy with the supervisor, who is very human and very collegial to me. Many points are also made possible that I had not experienced before, such as further training concepts and the superiors also always have an open ear. The communication channels are very short."</p> <p>"We are all on the same hierarchical level."</p> <p>"Furthermore, I think it is quite important to leave this old-fashioned thinking with the professional experience and not to agree and suppress the opinions of others because of the years of professional experience. There are many innovative ideas that come from young colleagues, including trainees [...]."</p>
3	Project Manager Red (2)	<p>"[...] there are all kinds of people, and they are all heard, listened to, and accepted.... So, yeah, I think it's inclusive."</p> <p>"There are certain biases in Red's decision-making culture, and that has a negative impact on us. The recommendations we've put on the table over the last four months are being ignored."</p> <p>"It's based on mutual respect and honesty. You have to find a method of communication that works for both people, both groups, parties, whatever it is."</p> <p>"The project is not as profitable as it should be. And even though we've shown this four, five, six times, the top management keeps sending the time and saying, "Well, do this and do that." At a certain point, the team is just done, the team is done, there's nothing left to see, there's no more stones to turn [...]."</p> <p>"So everyone in the team is pretty disappointed at the moment. [...] At a certain point, you're just not motivated anymore."</p> <p>"[...] if the management doesn't follow your recommendations, and repeats that, even though you've made really very good arguments, that's very, very disappointing."</p>
4	Salesperson Red	<p>"I'll put it this way, we are an international company and when employees from other countries come together who don't speak German, it's not a discussion at all, English is spoken. [...] if there is someone from Switzerland who comes from the Italian or French part of the country, then they always ask: in English or in German?"</p>
5	Engineer Silver	<p>"And you were more likely to go to the boss when there were problems and the boss would solve them for you."</p> <p>"At Silver, I was actually able to live my life to the full and I also had a lot of ideas that I could contribute. Many of them worked and I received recognition for them. Of course, that also motivated me as an employee."</p> <p>"Well, we also had an innovation team. You could bring in hand-drawn suggestions for any ideas. They then followed up and looked to see whether it was worthwhile for us or not."</p>

	Identification	Quotes
6	Head of Project Management Red	<p>"The collectivism is already stronger here and also the sense of belonging. There's this jacket here for everyone who starts here."</p> <p>"But people should work things out for themselves. And where they really don't get anywhere, then let's talk about it. There also always try to play the ball back again."</p> <p>"I've commissioned a few presentations before where I knew very clearly what I actually wanted. Then I got it back again and it just looked different. But then I looked at it and it was very good, you really have to stay open-minded about it."</p> <p>"[...] the less control, the better things usually go."</p> <p>"My predecessors controlled more than I did, definitely. [...] And I noticed that when I arrived here in the team, that some were already a bit frustrated."</p>
7	Innovation Manager Blue	<p>"I would say it's not not forced."</p> <p>"I think it's welcomed. But it's not like I see actively wanting to have these cultural diversities, but more like really activating the specialties, the skills of the one person."</p> <p>"[Inclusion] is a must when you're in the startup industry with such a turnover that we have, of so many diverse startups, if we're going to work with them, that's a must."</p> <p>"Having a space where you can address anything. [Also] communication and feedback."</p>
8	Product Manager Silver	<p>"My team is super important to me and we actually have a lot of team cohesion [...] and there's always someone else organizing team events and that's really important."</p> <p>"Employee surveys [...] from this we also collected new ideas together with our managers on how we can give even better feedback [...], our managers also invested a lot of time in this, although it is actually already very good."</p> <p>"They're all people you can talk to quite openly, no sense of hierarchy where now you have to feel scared or constrained or anything, but really a good relationship."</p>
9	Head of Racing Black	<p>"[...] we don't pay much attention to an inclusive working environment. The cultural differences are very small or hardly noticeable. That's why you hardly have to do integration from people's cultural background as well."</p> <p>"The big difference from motorsports to the normal environment, is that of evaluating your success over time."</p> <p>"Every one of us, from team management with me to the tire mechanic [is evaluated]."</p> <p>"That's the glaring thing about motorsports, that everything is transparent. It starts with the drivers with the data. There are many systems in the car that monitor the car. In other words, the engineers who developed it or look after it are also absolutely transparent."</p> <p>"And because people have always worked in this field for a long time and do it with a great passion, then it's normal."</p> <p>"So you have maximum trust."</p> <p>"[...] because all the people with us want to win. It's already very success-oriented."</p>
10	Innovation Manager Green	<p>"[...] perhaps the culture of trust with the boss was broken to some extent."</p> <p>"Yes, so I then at some point took the first step, then resigned."</p> <p>"But is then gradually, it has then led to other colleagues, so really shortly after also quit, quit and walk out."</p> <p>"I'm a fairness person. I need to feel like things are fair, and I'm also very demanding."</p> <p>"Management attention is also insanely important as intrinsic motivation."</p>

Adaptation process

	Identification	Quotes
1	Project Manager Red (1)	"So the colleagues just kind of adapt to each other. That happens after a while, I think. But at the beginning, it could still crash, yes. That's what we're feeling right now, too, right now with me."
2	IT Consultant Gold	"It's just things that cause initial friction, but that get better as they go along and don't become a hard blocker in the work." "Due to the fact that we work in the IT industry and the communication in the code language is very similar and the same, many conflicts dissolve."
3	Project Manager Red (2)	"When I worked at Yellow, it basically became standard for the technical project manager and I to talk on the phone every day." "And it just became kind of a routine (...)" "It's the experience of working together that brings a team together". "It is a truly human, universal characteristic". "Both sides had to adapt there. It takes time, it takes time and effort and emotion, and you have to be willing to do it."
9	Head of Racing Black	"People fit together. We had the case that until a few years ago we had two engineers who didn't harmonize well with each other."

Outcomes of cultural diversity and inclusion

	Identification	Quotes
1	Project Manager Red (1)	"[...] it definitely makes sense to have a wide variety of personalities or cultures [there]. You also learn a lot and most of the time they have really different approaches." "And I think everyone can learn from that, before the same group of people is always together and everything is always the same. That's the difficult thing, that somehow everything feels like it's always at a standstill now and there's no innovation whatsoever."
2	IT Consultant Gold	"I think it's also very important for oneself because you're open to new things and therefore you can also consider many different ways of thinking and also many different innovations that you don't see at first glance, perhaps so." " For us now in the automotive industry, where we are currently active, we know that the customer is marketing its products internationally and not just in Germany."
3	Project Manager Red (2)	"I mean, if you look at the two best-selling cars, they're both cars that were developed jointly by Red and Yellow. The Project 1 and the Project 2 work very, very well."
4	Salesperson Red	"[Cultural diversity], that's encouraged and it's even desired, clearly. Diversity is desired. Especially the mix of different cultures, you just expect more from that - possibly also more innovation and more spirit. It's all a bit more interesting than if it's always the same."
6	Head of Project Management Red	"You can recognize it in people's faces. Those who have had to deal with other cultures before, who have lived in other cultures, act and react very differently." "When I come back now and have a conversation like I did with the Hungarians, I will of course act differently than I did before. That is simply a completely different understanding. [...] you can see that professionally, as well as on a personal level." " [...] the added value from diversity and from the other approaches, from the other ways of doing things is so much higher than the little bit where I have to speak a little bit slower now, where I have to ask maybe one, two times more."
8	Product Manager Silver	"When we bring in new ideas and show different perspectives it is of course positive." "Definitely to further develop what we do."
9	Head of Racing Black	"[...] by the fact that the people are so international, they have of course also had their experiences in the most different racing series in the world and they bring this input, which is very positive." "If you would say, I have to make a team of only Germans, you would probably have people who have mainly worked in German-national motorsports. And then, of course, you're definitely less innovative. That's why I would say this internationality is definitely an advantage." "I definitely find [cultural diversity] to be empowering."

Further findings

	Identification	Quotes
1	PM Red (1)	"[...] now with all the videoconferencing and teleconferencing, the people who don't tend to be punctual come even later or just don't show up sometimes."
3	PM Red (2)	<p>"There is not one department or another. Sometimes you find very creative people in departments where you think, 'How did that person end up there? How did that work out?'"</p> <p>"Look, at Red we are a company of engineers for engineers. [...] Red basically believes that you can put an engineer in any department and they'll be okay. [...] So we tend to be pretty similar in a lot of cases."</p> <p>"But a lot of people tune out, a lot of people in these meetings where there are 20, 30 people, they don't listen."</p> <p>"[What C-19] adds is redundancy".</p> <p>"Because every time you describe something, it's a little bit different. That leads to having different ideas throughout the team. That leads to a lot of conflict."</p>
6	Head of PM Red	"I don't think you can treat all people the same."
7	IM Blue	<p>"Autonomous driving in particular is extremely well developed, I would say, all the radar systems, etc., in Tel Aviv. I.e. we now have a new office there, we work with them a lot."</p> <p>"[...] you can't imagine how many functions in a Blue car today have been outsourced by start-ups."</p> <p>"We use the start-up where it's better than the rest. And [our department] just has the background of tying these technologies to Blue."</p> <p>"And I notice that sometimes they're even better at solving certain problems than a big corporation. And I think that's also why Blue works with startups."</p> <p>"[...] a start-up can adapt, adapt to a problem in seconds. And I notice that with startups, things are much looser. There aren't these hierarchies, these regulations, I'll say, that hold back a new implementation, an innovation."</p>

	Identification	Quotes
10	IM Green	<p>"I believe that good ideas only come about if you have the freedom and freedom of thought. Versus, if you are in a corporation, your task is not to be a free spirit or to spin ideas, but to function."</p> <p>"[...] we as Green have certain competencies, that is manufacturing and forging."</p> <p>"[...] if you just develop a new AI, which is to test the quality of forged components very specifically with light field imaging. Yes, then you go around on the street in the pedestrian zone and ask if anyone wants to join in."</p> <p>"I think in the end, maybe the universities also play a supporting role."</p> <p>"[...] if the university doesn't ensure that very diverse people from all over the world come together in its research lab, in its robotics research lab, and then later also go into a joint foundation, well, I think that also lays the foundation stone."</p> <p>"[OEMs] that look completely internationally and are also open to many, many more topics there. They have eight, nine different fields where they are looking."</p> <p>"But maybe that's simply because the product, which is ultimately produced, can be used very universally. It doesn't have to be adapted to any market-specific requirements. It works the same everywhere."</p>

Declaration of Authorship

I hereby declare that the thesis submitted is my own unaided work. All direct or indirect sources used are acknowledged as references.

I am aware that the thesis in digital form can be examined for the use of unauthorized aid and in order to determine whether the thesis as a whole or parts incorporated in it may be deemed as plagiarism. For the comparison of my work with existing sources I agree that it shall be entered in a database where it shall also remain after examination, to enable comparison with future theses submitted. Further rights of reproduction and usage, however, are not granted here.

This paper was not previously presented to another examination board and has not been published.

Date: May 26, 2022

Name: Christopher Meng