Czech University of Life Sciences Prague

Faculty of Economics and Management

Department of Statistics

Bachelor Thesis

Statistical Analysis of Digital Social Communication in Austria and the Czech Republic

Madiyar Batanov

© 2025 CZU Prague

CZECH UNIVERSITY OF LIFE SCIENCES PRAGUE

Faculty of Economics and Management

BACHELOR THESIS ASSIGNMENT

Madiyar Batanov

Informatics

Thesis title

Statistical analysis of digital social communication in Austria and the Czech Republic

---

Objectives of thesis

The aim of the bachelor thesis is to use statistical analysis of data from the European Social Survey 2020 (ESS2020) to assess differences in the use of digital social communication tools in the personal or working life of the population in Austria and the Czech Republic.
The significance of this study lies in its potential to offer valuable insights into the use of digital social communication in two neighbouring countries Austria and the Czech Republic. Policymakers, researchers, and businesses can benefit from this understanding to develop strategies to leverage digital communication tools to improve social and economic outcomes. Furthermore, the study could contribute to the growing literature on the use of digital communication in Europe, providing a basis for future research on the topic.

Methodology

The analysis will utilize data from the European Social Survey 2020 (ESS2020), a cross-national survey aimed at understanding the attitudes and behaviors of individuals across Europe on a range of issues, including social and political participation, social networks, and social inequality.

To identify differences in the level of digital social communication between different socio-demographic groups and two countries with different economic level – Austria and the Czech Republic, the study will employ descriptive and inferential statistics. The research questions and hypotheses will be discussed in the context of existing literature to provide a comprehensive understanding of the topic.

The proposed extent of the thesis

40-50 pages without annexes

Keywords

digital social communication; socio-demographic groups; Czech Republic; Austria

---

Recommended information sources

CARLSON, Kieth A.; WINQUIST, Jennifer R. *An introduction to statistics : an active learning approach.* Thousand Oaks, Calif.: SAGE Publications, 2014. ISBN 9781452217437.

FIELD, Andy P. *Discovering statistics using IBM SPSS statistics.* Los Angeles: SAGE, 2018. ISBN 978-1-5264-1952-1.

GLATZ, Christoph; EDER, Anja. Patterns of trust and subjective well-being across Europe: New insights from repeated cross-sectional analyses based on the European social survey 2002–2016. Social Indicators Research, 2020, 148.2: 417-439.

CHO, Seongha. Economic conditions and social cohesion: an analysis of French European Social Survey data. French Politics, 2021, 1-28.

KURTZBERG, Terri R. *Virtual teams : mastering communication and collaboration in the digital age.* Santa Barbara: Praeger, 2014. ISBN 978-1-4408-2837-9.

LITWIN, Howard; LEVINSKY, Michal. Social networks and mental health change in older adults after the Covid-19 outbreak. Aging & mental health, 2022, 26.5: 925-931.

Expected date of thesis defence

2023/24 SS – PEF

The Bachelor Thesis Supervisor

prof. Ing. Jindřich Špička, Ph.D.

Supervising department

Department of Statistics

Electronic approval: 28. 05. 2023

Ing. Tomáš Hlavsa, Ph.D.

Head of department

Electronic approval: 03. 11. 2023

doc. Ing. Tomáš Šubrt, Ph.D.

Dean

Prague on 19. 02. 2025

Declaration

I declare that I have worked on my bachelor thesis titled ***"Statistical Analysis of Digital Social Communication in Austria and the Czech Republic"*** by myself and I have used only the sources mentioned at the end of the thesis. As the author of the bachelor thesis, I declare that the thesis does not break any copyrights.

In Prague on 15.03.2025 _____

Acknowledgement

For his great direction, knowledge, and assistance during the research and thesis writing process, Ing. Prof. Indřich Špička deserves my most thanks. The course of my research has been much shaped by his perceptive comments and support.

Statistical Analysis of Digital Social Communication in Austria and the Czech Republic

Abstract

This thesis examines the statistical landscape of digital social communication in Austria and the Czech Republic, focusing on digital infrastructure, internet access, digital skills, and trust in public institutions. Through statistical analysis and hypothesis testing, the study identifies key differences between the two countries in terms of digital proficiency and governmental communication. Austria demonstrates a more developed digital infrastructure and higher levels of digital literacy, while the Czech Republic continues to expand its digital capabilities but faces challenges in accessibility and trust in institutions. The findings highlight a significant relationship between institutional trust and online engagement, influencing public interactions with digital government services. Additionally, Austria exhibits higher satisfaction levels with public services compared to the Czech Republic. The thesis underscores the importance of digital policies and public trust in shaping effective digital communication strategies. Despite certain limitations, the research provides valuable insights into the evolving digital landscape in both countries, contributing to discussions on digital inclusivity and governance.

Keywords: digital communication, socio demographic group, Czech Republic, Austria.

Statistická analýza digitální sociální komunikace v Rakousku a České republice

Abstrakt

Tato bakalářská práce zkoumá statistické údaje o digitální sociální komunikaci v Rakousku a České republice, přičemž se zaměřuje na digitální infrastrukturu, přístup k internetu, digitální dovednosti a důvěru ve veřejné instituce. Prostřednictvím statistické analýzy a testování hypotéz studie identifikuje klíčové rozdíly mezi oběma zeměmi, pokud jde o digitální dovednosti a vládní komunikaci. Rakousko vykazuje rozvinutější digitální infrastrukturu a vyšší úroveň digitální gramotnosti, zatímco Česká republika nadále rozšiřuje své digitální schopnosti, ale potýká se s problémy v oblasti dostupnosti a důvěry v instituce. Zjištění poukazují na významný vztah mezi důvěrou v instituce a online zapojením, který ovlivňuje interakci veřejnosti s digitálními službami veřejné správy. Rakousko navíc vykazuje vyšší míru spokojenosti s veřejnými službami ve srovnání s Českou republikou. Studie zdůrazňuje význam digitálních politik a důvěry veřejnosti při utváření efektivních digitálních komunikačních strategií. I přes určitá omezení poskytuje výzkum cenné poznatky o vývoji digitálního prostředí v obou zemích a přispívá k diskusím o digitální inkluzivitě a správě věcí veřejných.

Klíčová slova: Digitální komunikace, sociodemografická skupina, Česká republika, Rakousko.

Table of content

1 Introduction 10

2 Objectives and Methodology 11

2.1 Objectives 11

2.2 Methodology 11

3 Literature Review 12

3.1 Defining Digital Communication 12

3.1.1 Different Types of Digital Communication 13

3.1.2 Challenging Factors of Digital Communication 16

3.1.3 Success Factors of Digital Communication 18

3.1.4 How are Governments Communicating in a Digital Age? 21

3.2 Digital Communication Landscape in Austria 24

3.2.1 Telecommunications and Internet Access Services in Austria 25

3.3 Digital Communication Landscape in Czech Republic 27

3.3.1 Digital skills 28

3.3.2 Digital infrastructures of Czech Republic 29

3.4 Trust in national institutions 31

3.4.1 Factors affecting trust and distrust 32

3.4.2 Marco – level conditions 33

4 Practical Part 35

4.1 Trust in public institutions 35

4.2 Development of Digital Context 39

4.2.1 Czech Republic 39

4.2.2 Austria 40

4.2.3 CGI pillar in 2019 45

5 Results and Discussion 48

5.1 Hypothesis Testing for Internet Access Locations 48

5.2 Hypothesis Testing for Digital Skills and Internet Usage 48

5.3 Trust in Public Institutions 48

5.4 Satisfaction with Public Services 49

5.5 Limitations 50

6 Conclusion 51

7 References 52

8 List of pictures, tables, graphs and abbreviations 57

8.1 List of tables 57

8.2 List of Figures 57

9 Appendix 58
9.1 Trust 58
9.1.1 Chi-Square Output 60
9.2 Satisfaction with economy, national government, democracy, education and health services 61
9.2.1 Chi-Square Output for "Satisfaction" 63
9.3 Location and ability to access internet 65
9.3.1 Chi-Square Output of Location Access of Internet 67
9.4 Usage of internet a day, its frequency, PDF familiarity and advanced search. 68
9.4.1 Chi-Square test for Internet usage, frequency, PDF familiarity and advanced search 70

1 Introduction

Public trust and satisfaction with government institutions and services are central to the functioning of any democratic society. In particular, the trust that citizens place in public institutions—such as the legal system, police, government, and political parties—can influence their willingness to comply with laws, engage in civic activities, and participate in the political process. Public satisfaction with services such as healthcare, education, and the economy also play a key role in determining the overall well-being of citizens and the legitimacy of the government. The importance of these concepts is particularly evident in the context of European Union (EU) countries, where governance and institutional effectiveness directly impact political stability, economic performance, and social cohesion.

This thesis aims to explore the comparative analysis of trust in public institutions and satisfaction with public services in two EU countries—Czech Republic and Austria—based on the results of recent surveys. The focus is on identifying key differences and similarities between the two countries, examining how these factors influence political engagement, governance quality, and social outcomes. Specifically, the study will analyze data from the 2023 European Social Survey (ESC) and the 2023 OECD Trust Survey, which investigate public opinion on various aspects of political life, public services, and the functioning of governmental institutions.

The level of public trust in governmental institutions and the satisfaction with public services are often used as indicators of the health of a democracy. Trust is considered crucial for the legitimacy of the state, as it shapes citizens' attitudes towards policy reforms, elections, and their willingness to contribute to societal development. While both the Czech Republic and Austria are EU member states with relatively similar political systems, their history, economic structure, and cultural context have shaped their citizens' trust in institutions and satisfaction with public services in distinct ways.

2 Objectives and Methodology

2.1 Objectives

The primary objective of this bachelor thesis is to conduct a statistical analysis of data from the European Social Survey 2023 (ESS2023) to examine differences in the use of digital social communication tools in personal and professional contexts between Austria and the Czech Republic.

This research aims to provide valuable insights into the adoption and utilization of digital communication tools in these two neighboring countries. The findings will be beneficial for policymakers, researchers, and businesses in formulating strategies to enhance social and economic outcomes through digital communication. Additionally, the study seeks to contribute to the existing body of literature on digital communication in Europe, offering a foundation for further research on the topic.

2.2 Methodology

The study will leverage data from the European Social Survey 2023 (ESS2023), a cross-national survey designed to explore attitudes and behaviors of individuals across Europe on various topics, including social and political participation, social networks, and social inequality.

To identify differences in the use of digital communication tools, the analysis will consider socio-demographic variables and economic factors within Austria and the Czech Republic. The study will employ descriptive and inferential[1] statistical methods to examine these differences and test relevant hypotheses. The research will also evaluate the current state of digital communication to provide a contextual understanding for future policy and strategy development.

[1] Mann-Whitney Test

3 Literature Review

3.1 Defining Digital Communication

Digital communication is the use of digital technology for interaction between individuals and electronic devices. Digital communication entails the utilization of digital technology equipment, such as mobile phones, computers, or other digital apparatuses, to interact across a digital network with individuals or other computers/digital machines. The message may be conveyed using speech, sound, images, videos, text, 3D animations, and other mediums. Epitech (n.d.) defines digital communication as the transmission of data or information using digital signals via a point-to-point (P2P) channel. A P2P connection is a communication mechanism between two endpoints. This definition of digital communications emphasizes the technical or engineering perspective, sometimes referred to as data communication or data transfer. This book has a human communication viewpoint. Consequently, Tagg (2015) defines digital communication as the connection among individuals facilitated by digital communication technology, which encompasses instruments that convey information in various formats. She asserted that digital communication, as a human process, is not exclusively determined by technology but by practice; that this communication occurs within a network (Internet, Global System for Mobile Communications: GSM, Code-Division Multiple Access: CDMA, among others); it transitions focus from content creation to interaction, networking, and relationships; and it becomes progressively challenging to isolate media (Tagg, 2015).

Contemporary communication technologies and tools are continuously evolving to align with the dynamic digital transformation in which firms engage, playing a crucial role in efficient business processes; therefore, it is essential for businesses to possess the appropriate tools (Dziembek & Turek, 2018). Bordi et al. (2018) elucidate that the digital communication environment encompasses "the tools and modes of communication" with the tools signifying various communication methods, such as email or instant messaging (Bordi et al., 2018). Sashi (2020) asserts that "Digital communication provides a more rapid and convenient alternative that enables numerous individuals, irrespective of geographic location, to engage in frequent real-time communication, while also being less expensive and time-consuming." Digital communication is perpetually embraced and assimilated inside enterprises, enabling employee engagement and facilitating many interpersonal dialogues in which both the

sender and receiver maintain control over the discourse (Sashi et al., 2020). Prior to the emergence of digital communication, the sales connection between seller and customer was characterized by a clear distinction between personal interactions, such as face-to-face contact, and impersonal communication via advertising and publicity (Sashi et al., 2020). Emerging technology has made the difference in communication more ambiguous, facilitated by video conferencing, chat, social media, and several other digital communication methods (Sashi et al., 2020).

Literature describes the characterization of new digital communication channels and technologies in numerous ways (Lipiäinen et al., 2014), with the notion of "social media" emerging as an example (Lipiäinen et al., 2014). Kaplan and Haenlein (2010) emphasize that past research lacks a consistent definition of the idea of social media, despite its frequent citation. Kaplan and Haenlein (2010) articulate the concept of Web 2.0, defining it as the World Wide Web functioning as a platform that is available for modification by all users, facilitating user-generated content, which encompasses media accessed and developed by end users (Kaplan & Haenlein, 2010). Social media is described as "a group of Internet-based applications which depend on the technological and ideological underpinnings of Web 2.0, allowing the development and sharing of User Generated Content" (Kaplan & Haenlein, 2010).

3.1.1 Different Types of Digital Communication

Digitalization has profoundly altered communication among individuals in social networks and groups (Kovaitė et al., 2020). Lipiäinen et al. (2014) assert that digital communication technologies have grown more prevalent in facilitating interpersonal interactions. Madsen (2018) emphasizes that social media platforms facilitate interpersonal engagement, opinion sharing, and information dissemination, hence fostering environments for significant interaction. Furthermore, internet communication technologies facilitate virtual meetings and the dissemination of significant updates within communities (Smoląg & Ślusarczyk, 2021).

Unidirectional communication, including announcements or updates, is especially effective for disseminating choices or information to larger audiences (Kovaitė et al., 2020). Platforms such as group message boards or community-specific sites facilitate the distribution of information and content sharing, including news and pertinent updates about local events

(Lipiäinen et al., 2014). Nonetheless, whereas these technologies provide quick access to information, some persons may see them as overwhelming or ineffective when seeking precise specifics. The absence of interaction on these platforms may obstruct conversation and restrict prospects for profound involvement (Lipiäinen et al., 2014).

Two-way communication technologies are crucial for people to exchange viewpoints and participate in substantive debate (Kovaitė et al., 2020). Social media platforms (Madsen, 2018) and email continue to be favored for enabling rapid, accessible, and economical communications (Lipiäinen et al., 2014). Email provides a simple method for communication and documentation of discussions, often acting as a favored substitute for face-to-face interactions (Lipiäinen et al., 2014). Emails encounter obstacles such as information overload from numerous messages, issues in assessing message importance, and the lack of tonal nuances, which may impede successful communication (Lipiäinen et al., 2014; Bordi et al., 2018). The presence of several inboxes exacerbates the difficulties of efficiently handling digital communication.

Historically, private social media platforms served as the principal medium for interpersonal communication, establishing the foundation for the extensive use of social media solutions and platforms in contemporary society. Numerous platforms already facilitate the establishment of community or public pages (Leonardi et al., 2013). Leonardi et al. (2013) elucidate that private systems have gained prominence owing to their superior security requirements. Digital communication includes online social networks, such as public platforms like Facebook and restricted-access solutions tailored for particular groups or communities (Wang & Kobsa, 2009).

Platforms like Yammer serve as prime examples of these restricted-access solutions (Ewing et al., 2019). Leonardi et al. (2013) assert that digital communication technologies provide both focused interactions among people and broadcasts to broader audiences. Examples include email, group chat boards, and contemporary platforms for sharing files, images, and other material (Leonardi et al., 2013). Recently, prominent platforms like Microsoft Teams and Google Meet have risen in popularity, enabling online discussions, meetings, and joint endeavors (Kubacz-Szumska & Szumski, 2021; Smoląg & Ślusarczyk, 2021). These technologies have transformed digital social communication, facilitating more efficient and accessible methods for connecting and engaging with people.

The many technical instruments that influence social communication in communities and organizations together constitute a social media platform ecosystem, defined by four primary characteristics (Leonardi et al., 2013). These platforms must:

(1) enable communication among all users, permitting both private messages and public interactions observable by the whole community (Leonardi et al., 2013);
(2) participants must openly or implicitly recognize one other as communication partners, and;
(3) the platform must facilitate the exchange, modification, and categorization of files and texts among users (Leonardi et al., 2013).

Finally, all information, including messages, files, and connections, must be perpetually available (Leonardi et al., 2013).

Platforms exhibiting these characteristics often mirror widely-used social media, providing a familiar and intuitive interface (Leonardi et al., 2013). These traits are not distinct components but essential elements of a cohesive social media ecosystem (Dziembek & Turek, 2018; Leonardi et al., 2013). Social media platforms intended for widespread usage are classified into two categories: those using third-party solutions and those creating bespoke systems adapted to particular requirements (Weber & Shi, 2016). This dual strategy demonstrates the flexibility of social platforms in promoting linked and dynamic communication settings.

The widespread adoption of various social platforms highlights their significance in fostering communication and engagement among individuals (Chin et al., 2019). As digital communication tools continue to evolve and gain prominence, people increasingly face the responsibility of mastering these technologies to maximize their benefits, especially as the demand for remote interaction grows (Fikry & Mukhtar, 2012). To address this shift, unified communication (UC) solutions have emerged as essential tools for managing communication across geographical and digital boundaries. According to Fikry & Mukhtar (2012), UC is defined as "a solution for managing communication services across geographical boundaries and networks based on rules and policies that ensure seamless integration between services."

The market for unified communication systems has witnessed remarkable growth, valued at US$33.5 billion before the pandemic and projected to reach US$52.9 billion by 2027 (Kubacz-Szumska & Szumski, 2021). These systems are designed to integrate with other digital platforms, enhancing collaboration and productivity while promoting the frequent use of digital communication tools (Chin et al., 2019). Effective participation in these tools is critical for realizing their full potential (Chin et al., 2019).

Fluker and Murray (2017) note that UC system's connect individuals through instant messaging, audio calls, and video conferencing, enabling collaboration irrespective of location. However, instant messaging poses certain challenges, such as the lack of message documentation preferred in other tools (Lipiäinen et al., 2014). Furthermore, managing multiple simultaneous conversations can divert focus from more critical activities (Bordi et al., 2018). Despite these challenges, UC systems continue to play a pivotal role in streamlining communication and fostering seamless digital interaction.

3.1.2 Challenging Factors of Digital Communication

The implementation and use of digital communication technologies come with inherent risks, and their widespread adoption across society can be challenging to navigate (Ewing et al., 2019). Achieving a balance is essential, as these platforms must not only be functional but also foster meaningful connections. A culture centered on building relationships, both within and across communities, is vital for encouraging effective communication and collaboration (Chin et al., 2019). However, comments, posts, and messages on digital platforms can sometimes lead to negative outcomes. To mitigate these risks, it is important to have individuals dedicated to monitoring and managing activity on these platforms, ensuring that concerns are promptly identified and addressed (Ewing et al., 2019).

Digital communication serves as a powerful enabler, offering location-independent flexibility and enhancing the efficiency of various activities (Bordi et al., 2018). However, adopting digital communication solutions often requires learning and adaptation, which can present challenges for individuals (Bordi et al., 2018). Demographics play a significant role, as people's capacity to adopt new technologies can vary based on age and prior experience, highlighting differences in knowledge and prerequisites across generations (Ewing et al., 2019). For instance, while millennials might find digital communication methods intuitive,

Generation X may have distinct communication habits, leading to greater challenges in adapting to these technologies (Ewing et al., 2019).

Most individuals prefer using up to two platforms for both social and practical purposes, emphasizing the importance of simplicity (Kubacz-Szumska & Szumski, 2021). Excessive digital solutions can lead to technological overload, as seen during the Covid-19 pandemic when many people relied on multiple platforms for remote communication (Rodriguez et al., 2020; Kubacz-Szumska & Szumski, 2021). Additionally, the influence of widely used private platforms on digital networks intended for community interactions can sometimes undermine their intended purpose by creating a disconnect between informal and professional usage (Chin et al., 2019). Maintaining a balance between facilitating informal exchanges and fostering a safe, inclusive environment for knowledge sharing is crucial for meaningful and effective communication (Chin et al., 2019). However, the dependence on digital communication also affects social skills. Excessive reliance on virtual contacts may impair skills such as interpreting facial expressions, reacting to non-verbal cues, or resolving conflicts successfully. Essential social abilities, such as empathy, comprehension, and the ability to discern others' emotions, may diminish with less in-person interaction.

Leonardi et al. (2013) highlight that social media systems incorporating personalization features can curate content based on prior usage patterns, potentially restricting exposure to new ideas and negatively impacting collaborative efforts. Enterprise social media (ESM) platforms can act as "leaky pipelines," where disseminated messages and information might reach unintended recipients (Leonardi et al., 2013). This openness allows individuals to observe their peers' activities, fostering the development of new social connections (Leonardi et al., 2013).

However, awareness of this transparency can lead individuals to withhold discussions on sensitive topics to maintain privacy, recognizing that shared material might be accessible to others (Leonardi et al., 2013). Moreover, the nature of information exchanged—whether among individuals or with external stakeholders—is crucial, as it involves the risk of sensitive details being inadvertently disclosed to unintended audiences (Ewing et al., 2019). Balancing openness with privacy is thus essential for fostering trust and collaboration while minimizing potential risks.

Adapting to the continuous advancements in digital technology and fully embracing a digital society demands transformative shifts in cultural attitudes (Savić, 2019), enabling individuals to maximize the potential of diverse digital communication tools (Smoląg & Ślusarczyk, 2021). Historically, individuals have observed that digital transformation often unfolds in a "random and incremental manner" (Guenzi & Habel, 2020), despite the anticipation that technology will play a pivotal role in enhancing interactions and collaborations in the future (Ahearne & Rapp, 2010).

Complex undertakings often require a synergy between technological tools and human expertise, where technology supports communication while individuals articulate and adapt the message (Ahearne & Rapp, 2010). It is thus critical for people to be equipped with adequate digital resources to address emerging demands (Crittenden et al., 2019). Effective digital communication depends on the mutual engagement of all involved, where the skillful use of technology ensures satisfaction and fosters meaningful dialogue (Ahearne & Rapp, 2010).

Successful initiatives in digital communication can enhance cooperation and sustain trust and loyalty within communities (Crittenden et al., 2019). The growing reliance on digital communication and its evolving applications increasingly challenge societies to offer innovative technical solutions that align with the rapid pace of technological development (Tiago & Veríssimo, 2014).

3.1.3 Success Factors of Digital Communication

Digital solutions may augment in-person contacts by integrating technical tools, such as tablets, enabling personnel to convey offers digitally while preserving human involvement. This flexibility facilitates the customization of interactions according to audience preferences (Guenzi & Habel, 2020). These digital technologies enhance information visualization and facilitate knowledge transfer, allowing parties to access data and pictures more efficiently (Guenzi & Habel, 2020). Moreover, digital communication facilitates bidirectional exchanges, therefore reinforcing ties and improving cooperation among people (Ewing et al., 2019).

Chin et al. (2019) examine the determinants affecting corporate social media use by differentiating between consumptive and contributive engagement. Consumptive usage

denotes the degree to which users engage with business social networks to get information, like requesting help, accessing news, or finding documents (Chin et al., 2019). Conversely, contributive usage involves disseminating information or expertise, including responding to inquiries or providing updates (Chin et al., 2019). The equilibrium between these two use types is essential, since a significant disparity suggests an imbalance in social network participation (Chin et al., 2019).

The material on these platforms is crucial for facilitating both consumptive and contributive engagement. Engaging, relevant, and regularly updated information cultivates deeper interpersonal relationships and enhances individuals' identification with the larger group (Chin et al., 2019; Ewing et al., 2019). Nonetheless, whereas frequent content updates may enhance consumption, they can simultaneously diminish contributions if the material provided becomes adequate (Chin et al., 2019).

Digital platforms need to empower people by offering chances to express their views and opinions, thereby cultivating a feeling of engagement and ownership (Ewing et al., 2019). Performance expectancy, the conviction that system utilization will augment productivity, is a pivotal element for both consumptive and contributive use. Conversely, effort expectancy, characterized as the perceived simplicity of system usage, exerts greater influence in contributive contexts (Chin et al., 2019; Venkatesh et al., 2003).

The development of contributive use among individuals is strongly influenced by the social dynamics within a group (Chin et al., 2019). This influence reflects the extent to which a person believes that others expect them to engage with a particular system (Venkatesh et al., 2003). Those with decision-making authority, influential voices, and active participation play a pivotal role in encouraging broader engagement and are often seen as ambassadors for the adoption of digital communication platforms (Chin et al., 2019).

These ambassadors should receive explicit support from leadership, both within digital platforms and in face-to-face settings, to amplify their impact (Yee et al., 2020). Moreover, fostering positive attitudes toward digital communication often hinges on motivating technically skilled individuals to lead by example (Ewing et al., 2019).

Herd behavior, where individuals align their actions with those of others even when it contradicts their personal knowledge, highlights the importance of leveraging influential

figures to navigate potential conflicts and ensure widespread adoption of digital practices (Chin et al., 2019)

Communities must develop expertise in technology and provide training and support options for individuals; otherwise, users may face significant challenges (Venkatesh et al., 2003). People's perception of societal support for adopting new technologies is positively linked to their engagement (Chin et al., 2019). Offering clear instructions and information about system functionality can improve participation, as well-structured training guidelines enable individuals to utilize digital tools more effectively, serving as an enabler within the community (Rodriguez et al., 2020). Educational initiatives within society should promote open discussions and provide practical recommendations for participants (Ewing et al., 2019).

The knowledge gained through such programs can empower individuals to become self-reliant in using digital communication tools, allowing them to confidently share and exchange ideas with others (Yee et al., 2020). Additionally, it is essential to monitor usage trends over time, enabling community leaders to develop comprehensive strategies for balancing participation and content sharing (Chin et al., 2019). Relationship expectation, as defined by Chin et al. (2019), relates to how individuals perceive the creation and maintenance of connections within a community through digital platforms, primarily influencing active participation. Unlike passive consumption, active contributions are visible and can build a positive reputation within the group (Chin et al., 2019).

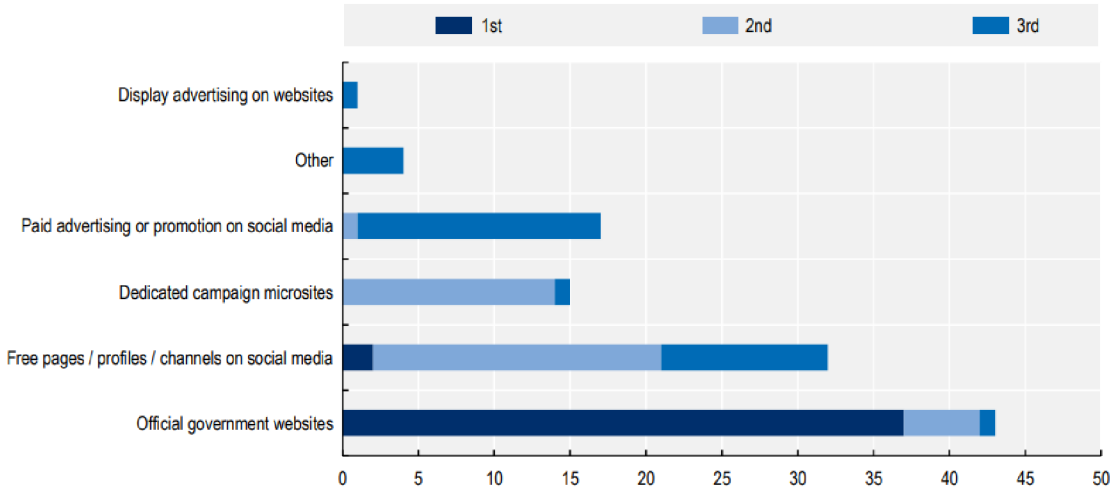
Chin et al. (2019) emphasize that a key factor in individuals' belief in the integration of a system into their daily activities is the sense of ownership, which is fostered by autonomy, meaningfulness, and fairness. Social media can act as a platform for self-expression and help individuals connect with others, including peers and mentors (Ewing et al., 2019). Therefore, incorporating such a system into individuals' daily routines and allowing them to manage their own workflow is crucial for successful adoption, as the effectiveness of the process depends on users' confidence in the technology used (Rodriguez et al., 2020). The tools used to establish social networks can be further combined with other technological solutions to create a unified communication tool, improving accessibility and simplifying use (Chin et al., 2019). Ongoing support and follow-ups with users can improve current usage patterns,

as these initiatives raise awareness and encourage the broader adoption of communication technology (Chin et al., 2019).

3.1.4 How are Governments Communicating in a Digital Age?

In contrast to conventional methods, digital technologies provide governments with several chances to enhance information dissemination and interact substantively with stakeholders in novel online environments. In addition to social media, websites, emails, videos, online advertising, mobile apps, and crowdsourcing platforms provide several avenues for public communicators to address diverse audience requirements. Emerging technologies, like artificial intelligence, voice assistants, and augmented reality, are exhibiting the capacity to disrupt conventional one-way communication patterns (Chin et al., 2019; Venkatesh et al., 2003). Technologies are providing public institutions with novel opportunities to engage vulnerable populations, facilitate discourse, automate information dissemination, and handle extensive data rapidly (Chin et al., 2019: OECD, 2021).

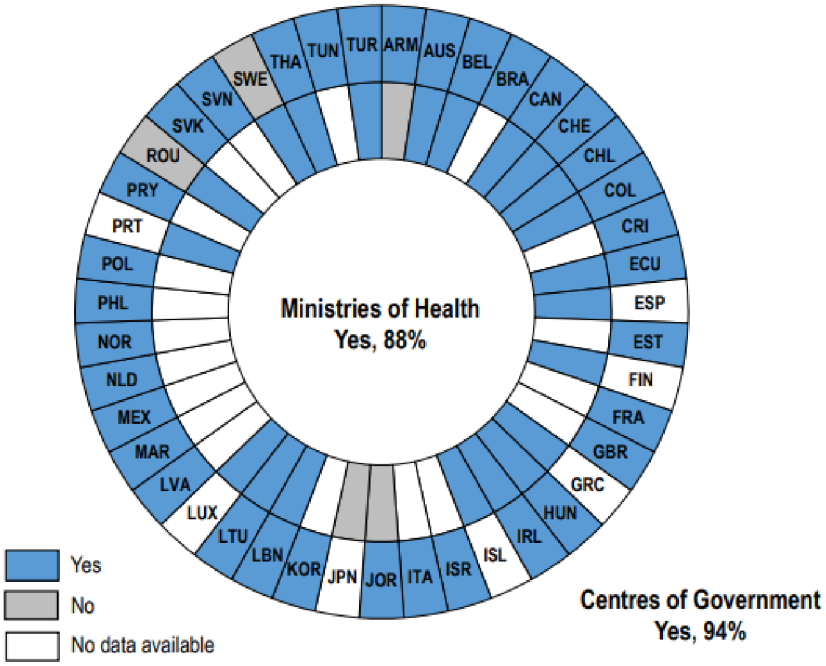
Figure 1: Top three digital communication channels used by CoGs



Source: OECD (2021).

As digital technologies become more prevalent, CoGs in both OECD and partner nations have established an online communication presence across many platforms (Figure 1). The OECD study findings indicated that institutional websites and social media platforms are the predominant methods for public engagement. Respondents emphasized the significance of institutional websites and "one-stop-shop" platforms that consolidate pertinent information on the COVID-19 epidemic. A significant proportion of CoGs reported using paid advertising on social media (44%) and specialized campaign microsites (38%) as their top three most used platforms. Online advertising via social media platforms (e.g., Facebook, YouTube, and Twitter) has emerged as the principal method by which a significant portion of CoGs (63%) disseminate government messages. Preferences for certain digital interfaces were uniform among CoGs and MHs, notwithstanding variations in organizational structures. Governments in OECD and partner nations, at both central and health sector levels, saw digital communication as a priority in their operations (Figure 2). Survey findings revealed that 34 of 36 CoGs have a designated unit, team, or person responsible for overseeing digital communications. The organizational structure inside CoGs mostly manifested as a digital communication department. Survey findings indicated that, in some instances, several divisions or departments shared these tasks, as seen in Sweden and Italy. These arrangements were uniform throughout the health sector, with 21 out of 24 mental health facilities having a designated team or unit for this purpose. Austria, Czech Republic and Germany did not provide information for this question in the CoG survey.

Figure 2: Digital communication structures



Source: OECD (2021).

As digital technologies become more integrated into the functions of public communicators and government administrations, this integration prompts inquiries on the need of distinguishing between "digital" and "non-digital" communication. The following part will assess the use of tools by CoGs and MHs, including mobile apps, social media, open government data portals, and other developing technology (OECD, 2021). This will advocate for a transformation in the conceptualization of communication, transitioning from a unidirectional process of disseminating information to a tool for engaging a broader array of stakeholders. It will also support the implementation of a "digital by design" strategy in the contemporary internet era to enhance omnichannel communication methods that provide greater accessibility and inclusivity (Chin et al., 2019).

3.2 Digital Communication Landscape in Austria

Austria, encompassing nearly 84,000 km² and housing with a population above 9 158 750 is a comparatively small nation within the European Union (EU), of which it has been a member since 1995. Austria ranks as the fifth wealthiest nation in the EU based on the gross domestic product (GDP) per capita volume index in purchasing power standards (PPS) (European Union, 2024). Moreover, in compared to other EU nations, Austria stands out as a robust performer in essential digital domains, including digital competencies, the assimilation of digital technology, and digital public services.

The European Commission's State of the Digital Decade 2023 study underscores the critical need for enhanced investments and advancement in technological infrastructure. Austria has considerable obstacles in stationary connection, beneath the European Union's average in the availability of fixed Very High-Capacity Networks (VHCNs). Notwithstanding significant investments in Fiber-to-the-Premises (FTTP), which led to a 10-percentage-point rise in Very High-Capacity Network (VHCN) coverage from 2021 to 2022, Austria continues to face challenges in maintaining competitiveness. A VHCN is characterized as an "electronic communications system consisting completely of fiber optic components up to the distribution point at the service location," or a system that replicates the efficiency of optical fiber regarding downlink and uplink the bandwidth, adaptability, mistake metrics, and delay, which includes its variation.

The adoption of fixed broadband with a minimum speed of 100 Mbps has risen somewhat from 22% in 2021 to 28% in 2022, however it's still well behind the EU average of 55%. Furthermore, the absence of 1 Gbps coverage among Austrian households sharply contrasts with the EU average of 13.8%. Notwithstanding these obstacles, Austria distinguishes itself as a leader in mobile connection and 5G coverage, with 92% of inhabited regions equipped with 5G by 2022, surpassing the entire EU coverage of 81%.

An online yearly poll performed for the Digital News Report by the Reuters Institute for the Study of Journalism (RISJ) offers extra informative data that enhances the understanding of the supply and consumption of news and media content in Austria. The 2023 survey, based on more than 2000 participants, indicates that 44% access to the internet over ten times per day, but just 4% connect just once per day. Regarding news consumption patterns, 60% of

participants admit to reviewing the news many times daily, while a notable 83% do so at least once each day. Regarding news sources utilized, 21% access 24-hour news broadcasting channels. Thus, 47% listen to broadcast news programs or announcements, 37% read newspapers in paper form, 8% peruse printed publications, 37% visit newspaper-related websites or applications, 37% engage with news magazine websites or apps, 26% access apps or websites of radio and TV organizations, 10% depend on internet pages or applications of other news sources, and 39% talk to social media for updated information.

The Austrian media environment is a compelling subject for both domestic and foreign analysts. Numerous services function within a competitive landscape, contending with both current and prospective rivals. Although this competitive dynamic is prevalent in global digital marketplaces dominated by a few major companies, Austrian traditional media confronts an additional challenge: competition with German media due to geographical closeness and a shared language. Sixteen German media firms, however, are generally more resourced because to their development and operation inside an economy almost 10 times larger than that of Austria. The competition, together with the restricted scale of their marketplaces, supports the rationale for subsidizing domestic entities and taxing foreign competitors in critical areas.

3.2.1 Telecommunications and Internet Access Services in Austria

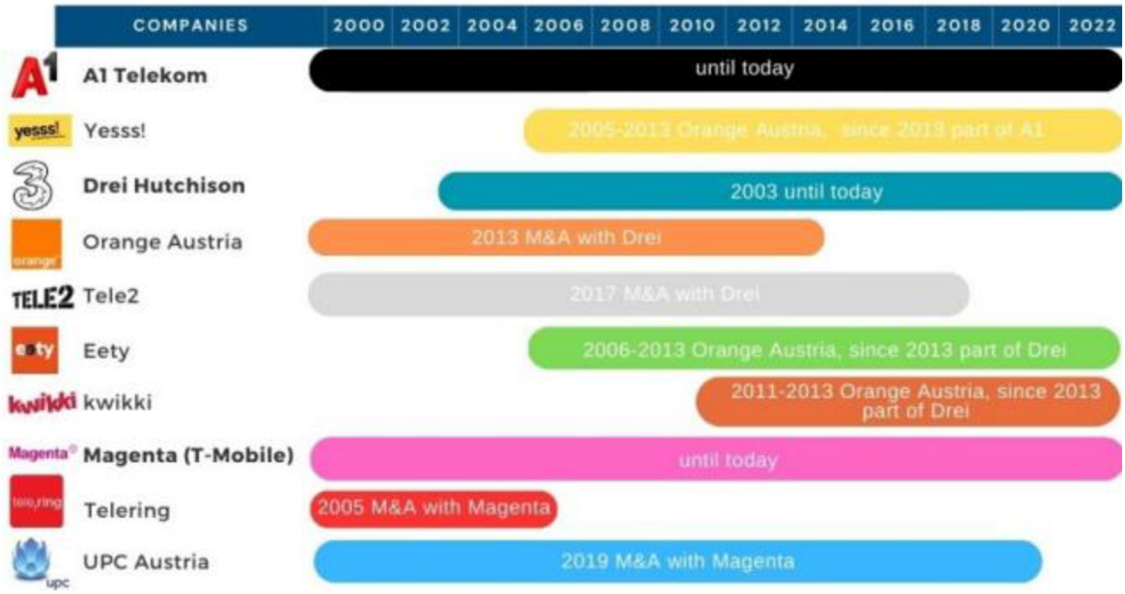
Telecommunications were deregulated in 1997, terminating the governmental monopoly Jörn (2007). Currently, the telecommunications sector in Austria is primarily controlled by the subsidiaries of three companies: the heritage firm Telekom Austria Aktiengesellschaft (or “AG”), Deutsche Telekom AG, and CK Hutchison (ibid).

Telekom Austria AG, founded in 1881 and based in Vienna, is the biggest telecommunications operator in Austria and one of the country's foremost enterprises. The corporation, even though traded publicly, is governed by the Slim family from Mexico. The firm operates in Austria via its subsidiary, A1 Telekom Austria AG ("A1"), offering both landline and cellular services. The corporation states that the wireline section encompasses voice telephony, diverse business solutions including data and IT services, Internet access, value-added services, and wholesale offers.

According to Jörn (2007), the Magenta Telekom Infra GmbH ("Magenta"), an affiliate of Deutsche Telekom AG, operating in Austria, providing Internet, mobile communications,

entertainment, and business solutions. Its offerings consist of optical fiber networks, DSL, wireless networks, and hybrid Internet. Furthermore, Magenta markets and distributes mobile phones. The firm, formerly T-Mobile Austria GmbH, renamed as Magenta Telekom in September 2018 after merging with UPC Austria. Established in 1996, Magenta was purchased by Deutsche Telekom in 2000.

Figure 3: Mergers and acquisitions in the Telecom and internet sector since 2000



Source: Sparviero et el (2024, p. 23).

Hutchison Drei Austria GmbH ("Drei"), an entirely owned subsidiary of CK Hutchison, participates in the Austrian market. Established as 3G Austria GmbH in May 2003 under the trademark "3," it served as the only exclusive UMTS operator in Austria upon its debut (Sparviero et el, 2024). Drei has achieved market significance over the previous decade by strategic acquisitions, notably Orange Austria in 2013 and Tele2 Austria in 2017, therefore consolidating its status as the third principal competitor alongside A1 and Magenta. Figure 3 above depicts the trends of acquisitions and mergers in the telecommunications and Internet access service sector, demonstrating its evolution into an oligopoly led by three primary entities.

3.3 Digital Communication Landscape in Czech Republic

As evidenced by the selection of a Deputy Prime Minister for Digitalization, the launch of the Digital and Information Agency (DIA), and the objectives outlined in the Government's Policy Statement from January 2022, which was revised in March 2023, this present government places a significant emphasis on digital change as an essential priority (Vlada, 2024). There is also a government strategy that is being executed at the same time, and it is called Digital Czechia. This strategy is being implemented on the basis of a collection of numerous partial ideas and implementation plans, and it is in accordance with the requirements of the Czech Republic as well as the policy of the Union. The Czech Presidency of the Council of the European Union in the second half of 2022 has made significant progress in the discussion of proposals pertaining to digital policies (Euroskop, 2024) and cybersecurity (Nukíb, 2024). This is one of the primary objectives that the Czech Presidency has taken up during this time period. It is still a top priority, not only at the national level, but also within the context of European and international collaboration, to ensure that the general and partial goals of the Digital Decade are met.

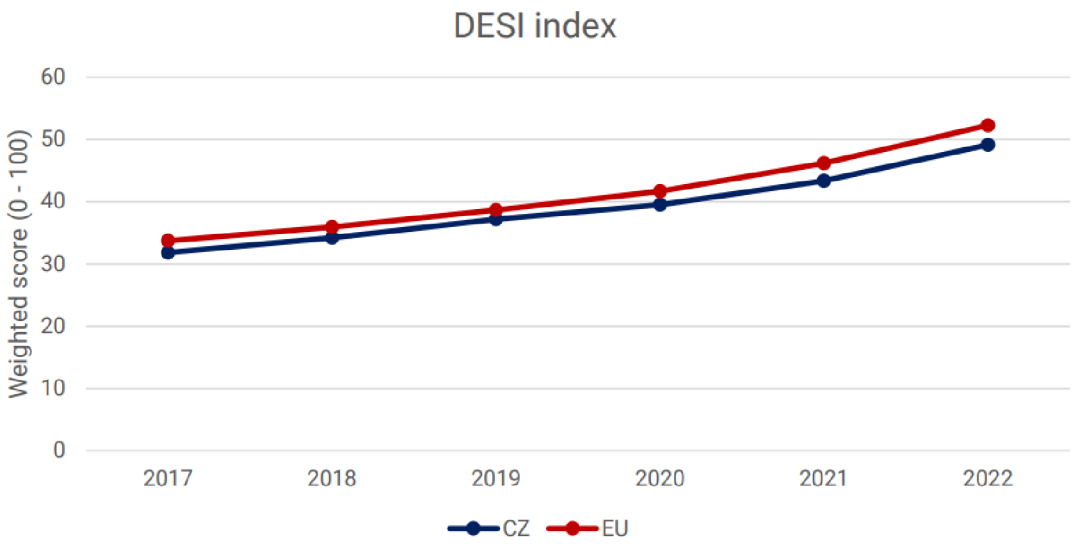
The Czech Republic is ranked nineteenth among the 27 member states of the European Union (EU) in the Digital Economy and Society Index (DESI) for the year 2022. In terms of human capital, the nation has the highest level of performance. With regard to digital public services and connectivity, the Czech Republic's ranking has improved from the year 2021.

Over the course of a longer period of time, the Czech Republic maintains a constant position between the 18th and 20th place in comparison to other EU Member States. According to Figure 4, the Czech Republic has been steadily increasing its score since the introduction of this index in 2017. This improvement is in line with the average growth that has occurred at the level of the European Union. Throughout the several editions of this index, the gap in score between the European Union and the Czech Republic has been between two and three points on average. The most recent scores attained by the Czech Republic in 2022 were 49, while the scores obtained by the EU were 52.

In 2023, the European Commission added the DESI index to its first Report on the state of the Digital Decade. This report looks at how the EU and its individual Member States are doing in their efforts to achieve effective digital change (DESI, 2024). The first assessment from 2023 doesn't have an overview that compares all Member States together. However, it

does provide comparisons for individual metrics, which are available in the DESI 2023 Dashboard. The study points out that the Czech Republic has a lot of promise and could strive to become a major player in modern technology. It supports the updated Digital Czechia plan and its connection to the goals of the Digital Decade Policy Program (ibid). This includes a focus on improving digital skills and making more public services available online. Instead, it shows that there aren't enough ICT workers and that businesses need to improve their digital tools and internet connections.

Figure 4: DESI Index



Source: Digital Economy and Society Index (2022).

3.3.1 Digital skills

Digital skills are the first of the four goals mentioned in Article 4 of the DDPP. The goal is for 80% of people aged 16 to 74 to have basic computer skills by 2030. In accordance with DESI figures, only 60% of the population in the Czech Republic will achieve this threshold in 2021, that remains beyond the EU average (54%). This goal aims to grow the number of ICT employees, focusing on encouraging female equality in the field. In 2022, just 4.5% of people aged 15 to 74 who had jobs worked as ICT workers, and only 10.9% of those had been women. The proportion of women in IT therefore ranks as the worst in the EU. In 2020, 25% of businesses offered ICT training. The total amount of candidates from colleges and trade schools in this area largely follows the trends in the local population. In accordance with figures from the Czech Statistical Office (CZSO, 2023), the number of college and

graduate students enrolled in this region is gradually rising, with 6.9% in 2018 and 7.7% in 2022. The number of candidates has also gone up slightly, with a rise of 5.5% in 2018 and 6.1% in 2022. The number of female students has been rising, going from 14% in 2015 to 18% in 2022.

The Czech government is promoting the enhancement of the population's digital abilities via the Digital Czechia program, which has been consistently updated since 2018 and changed in 2022 to align with the goals of the Digital Decade. A new pillar emphasizing digital learning has been established, along with the Education 2030+ Strategy and Strategic Line 1.4 Digital Learning. One of its objectives is to enhance women's engagement in the digital industry, in accordance with the aims of the Digital Economy and Society framework. This aligns with the Digital Decade's objective of promoting a human-centered, inclusive, transparent, and gender-equitable digital landscape.

The Committee for Digital Education, operating under the Government Council for Information Society, oversees the coordination of digital education initiatives, having formerly been known as the Interdepartmental Group for Digital Education. This group unites members from the governmental, business, and non-profit sectors. This project led to the development of the Digital Czechia – Digital Education concept, which includes proposals to enhance women's representation in ICT and broaden lifelong learning possibilities. In 2021, the Ministry of Education, Youth, and Sports implemented a redesigned ICT curriculum to enhance digital skills and computational thinking in elementary and multi-year grammar schools.

3.3.2 Digital infrastructures of Czech Republic

The second digital objective of the DDPP is to provide safe, robust, effective, and durable digital infrastructures. The Czech Republic rates 17th among the 27 EU Member States in communication, with an index that is somewhat behind the Union average. This is an important rise relative to 2021, when the nation had the 22nd position. In the domain of very high-capacity fixed network (VHCN) reach, it is important to note that the DESI metric does not accurately represent the current state in the Czech Republic, as it is confined to merely two technologies—FTTx and DOCSIS 3.1—opposite to the technology-neutral definition of VHCNs. Based on the 2022 statistics, the previous availability throughout the Czech Republic is 53%, and the subsequent availability is 59%.

Notwithstanding the increasing trend in the advancement of VHCNs, there is a need to bolster and accelerate the construction of these networks, particularly in regions with inadequate or nonexistent coverage. Under the National Recovery Plan (NPO), funded by the Czech Recovery and Resilience Facility (RRF), actions are proposed, including the development of a Digital Technical Map that will furnish essential information to expedite the advancement and construction of VHCN infrastructure. This target falls under the Digital Transformation pillar, especially section 1.3 Digital High-Capacity Networks, which has been allotted CZK 5,787 million and includes assistance for the development of the 5G network ecosystem.

The connection objective encompasses the scope of 5G network coverage. Following the deployment of 5G in the Czech Republic, coverage has expanded swiftly, encompassing 85.4% of the people and 76.2% of the land (across all bands) by the conclusion of 2022. As of 30 June 2023, 5G network coverage encompasses 94.6% of the people and 92.1% of the area. From 2024 to 2030, mobile network operators will progressively enhance the coverage of the Czech Republic with 5G networks, in compliance with the stipulations for 5G network development arising from the relevant allocations of radio frequencies. The NPO outlines plans for enhanced 5G network coverage in underpopulated regions and along key rail routes, including increased connection inside trains, to be implemented by 2030. A working group was established, consisting of stakeholders from the State government, State organizations, train carriers, and cell providers.

3.4 Trust in national institutions

Trust is influenced by several global and micro-level influences. At the macroeconomic level, wealth (GDP) serves as a robust predictor, particularly in Europe, where affluent nations often exhibit more public trust in institutions (Medve-Bálint and Boda, 2014). Wang and Gordon (2011) conducted a multidimensional study using data from 65 countries and discovered no statistically significant correlation between national GDP and institutional trust levels. A plausible explanation is that, from a global standpoint, the European development framework is distinctive in that several measures of social well-being (including trust), institutional excellence, and physical health are all positively correlated.

It is notably intriguing that, during the economic crisis and escalating inequality (OECD, 2015), there exists a paucity of research examining the relationship between income disparity and institutional trust. Numerous research has shown a negative correlation between wealth disparity and social (interpersonal) trust (Wang and Gordon, 2011). Considering the robust correlation between trust between individuals and institutional confidence, it is reasonable to infer a comparable relationship between economic disparity and trust in institutions. The multilevel analysis of inequality and institutional trust by Anderson and Singer (2008), using a sample of 20 European nations, revealed that increased income disparity correlated with diminished confidence in institutions. Nonetheless, whereas wealth disparity often adversely impacts trust, nations in Central and Eastern Europe seem to represent an exception to this trend. In these nations, institutional trust is not correlated with inequality (Medve-Bálint and Boda, 2014); rather, comparatively low levels of trust coexist with relatively low economic disparity. The rationale for this may reside in the attributes of political discourse and public sentiment: in Central and Eastern European nations, individuals typically overrate the degree of income inequality and exhibit higher standards for governmental intervention in addressing social issues (Medve-Bálint and Boda, 2014).

The level of trust in institutions is affected by the overarching culture of trust within the society in question. Fukuyama (1995) contended that civilizations may be classified as either high-trust or low-trust cultures, with this characteristic being historically grounded. Perspectives highlighting the significance of political culture contend that 'institutional trust is exogenous to the political realm, stemming from enduring and deeply ingrained cultural norms, and is an emergent characteristic of interpersonal trust that is ascribed to political institutions' (Campbell, 2004, p. 402). These views assert that trust in institutions is a

component of a broader belief system that affects the extent and manner in which individuals trust one another and impersonal organizations. In essence, the degree of confidence in institutions is higher in countries where, due to certain historical and cultural influences, overall social trust is elevated (Kunioka and Woller, 1999). Keele (2007) identified a significant correlation between interpersonal trust and institutional trust at the national level, indicating that a shared cultural background characteristic may influence both. The heightened volatility of trust in institutions, in contrast to interpersonal confidence, indicates that the former is shaped by elements within the general cultural context, such as assessments of institutional performance (Boda & Medve-Bálint, 2014).

3.4.1 Factors affecting trust and distrust

Numerous studies have examined the foundations of trust in the EU, evaluating ideas on the influence of European identity, national political discourse, educational attainment, and media consumption (Arnold et al., 2012). Identification and emotional affiliation with Europe seem to be significant factors. For example, Manzi et al. (2016) contend that there exists a connection to the EU, even in nations experiencing rising unemployment and declining living conditions. Individuals generally see the democratic processes and institutions of the EU as significant; yet, their perceived significance has evolved over time owing to heightened public knowledge of the ramifications of EU integration (Torcal et al, 2012). The expansion of higher education may foster greater knowledge of the deficiencies inside EU institutions, thus rendering individuals more reluctant or even disinclined to trust them (Arnold et al, 2012). As people acquire more knowledge, they may develop increased criticality and have elevated expectations for their leaders. This indicates that when further authority is delegated to the EU level, individuals may become increasingly skeptical and exigent towards EU institutions (Hobolt, 2012). Furthermore, those with elevated political expertise place greater emphasis on assessments of EU institutions when appraising democracy inside the EU (Karp et al, 2003). Recent research (Conti and Memoli, 2017) emphasized the media's influence on confidence in the EU. Individuals with more exposure to traditional media have a more favorable disposition towards the EU process and demonstrate a higher likelihood of trusting EU institutions.

3.4.2 Marco – level conditions

Confidence in the European Commission and the European Parliament seems to be significantly linked to the conditions of the real economy (unemployment and GDP per capita growth), but only during periods of crisis. Gomez (2015) shown that support for the EU is connected with macroeconomic situations post-crisis, which is expected considering the unpopularity of EU-endorsed austerity policies in several crisis-affected nations. Income disparity adversely impacts confidence in the European Commission and the European Parliament during stable periods, whereas this correlation intensifies and extends to the European Central Bank (ECB) during crises. Furthermore, inflation and unemployment seem to have significantly undermined faith in all European institutions negatively after the crisis (Bonasia et al, 2016).

Dissatisfaction with national public services seems to directly undermine faith in the EU in the majority of EU15 nations. This phenomenon is most evident in extensive welfare states, where limitations on welfare measures are seen as dictated by the EU, and where the most Eurosceptic parties simultaneously serve as the staunchest proponents of the welfare state. In Europe, the public's image of institutions is influenced by both their effectiveness and their integrity (Eurofound, 2012). Corruption erodes confidence in national political institutions, diminishes the perceived cost of ceding power to supranational bodies, and heightens voters' propensity to pursue alternatives inside the EU (Arnold et al., 2012). Moreover, citizens in Member States exhibiting elevated levels of national corruption tend to exhibit increased faith in international organizations such as the EU. This tendency seems to have diminished post-2008 (Obydenkova & Arpino, 2017).

Notwithstanding this transition, confidence in national institutions remains inferior to that in the EU (EPRS, 2016). In Romania, enthusiasm for the EU is mostly derived from national motivations rather than European ones (Radu, 2016). In contrast, living in a nation with highly reputable and efficient institutions often diminishes faith in the European Parliament (Muñoz et al., 2011). National circumstances significantly influence popular perceptions of the EU.

In light of these empirical results, some experts have suggested strategies to enhance public confidence in the EU. Mungiu-Pippidi et al. (2015) contend that the prevailing trust issue is partially fueled by the disparity between rigorous austerity measures enforced upon people and the self-interested conduct of politicians who flout regulations. Consequently, a change

in the behavior of EU lawmakers might facilitate the restoration of confidence. Hobolt (2012) posits that when individuals confer more authority to the EU and acquire a more profound comprehension of its functions, they cultivate elevated expectations for the quality of democratic institutions outside the national sphere. Consequently, cultivating a perception of public ownership is vital, irrespective of the locus of decision-making.

4 Practical Part

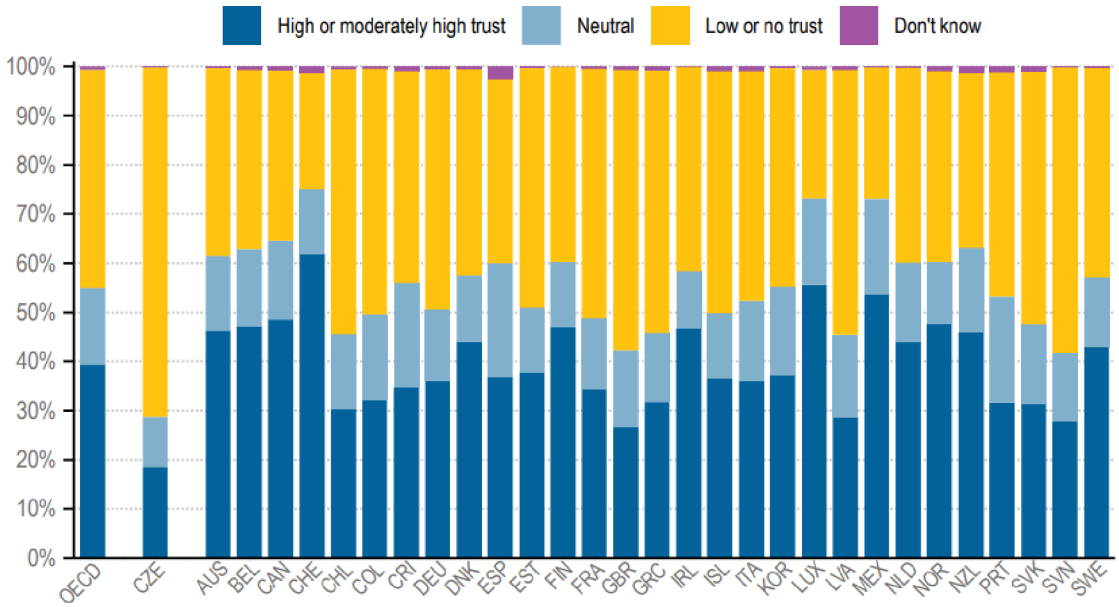
The practical section includes a statistical analysis based on data from the 2023 ESC survey, in which citizens of the Czech Republic and Austria participated. The survey covered a range of topics, including politics, internet usage, household matters, education, satisfaction levels in these areas, infrastructure development, and economic factors, among others.

Additionally, we examine the OECD faith Survey, which investigates individuals' impressions of various public institutions inside their nation and the extent of their faith in the government. These perspectives include daily contacts with governmental institutions and the formulation of complicated policy decisions. Commenced in 2021, the Trust Survey was conducted in 30 OECD nations throughout October and November 2023, yielding data that are representative of their respective adult populations.

4.1 Trust in public institutions

In the theoretical part it is defined what the trust is and how it is linked with the public institutions and EU in general. However, considering the Czech Republic, in 2023, 19% of the Czech populace expressed strong or fairly high confidence in the national government, which is below the OECD average of 39%, See Figure – 5.

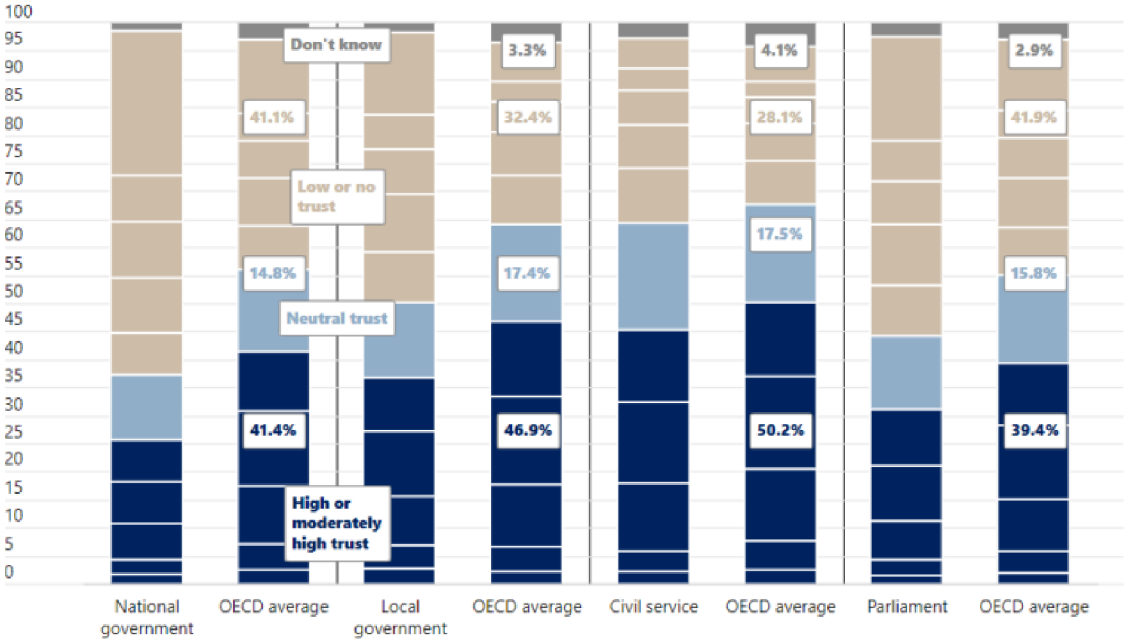
Figure 5: Share of population who indicate different levels of trust across EU



Source: OECD (2024).

Austria is among the highest in satisfaction with public services. Satisfaction with the healthcare system is at 81%, while satisfaction with the court system is at 76%, above the OECD average by 20 percentage points (56%). Satisfaction with the school system (75%) exceeds the OECD average (67%). Satisfaction with administrative services (66%) somewhat above the OECD average (63%). Only about one in four Austrians have high or moderately high trust in their national government (26%), less than the average across the OECD (41%). Trust in the civil service (45%), local government (37%) and parliament (31%) are higher, although slightly below the OECD averages.

Figure 6: Trust in public institutions of Austria



Source: OECD (2024).

It seems like the trust in public institutions and are higher in Austria than in Czech Republic. Thus, the hypothesis is the following:

H_1: The trust in the public institutions (legal system, police, politics and political parties is equal in Czech Republic and Austria).

H_0: The opposite of H_1.

Table 1: Mann-Whitney test for "Trust"

Hypothesis Test Summary				
	Null Hypothesis	**Test**	**Sig.**	**Decision**
1	The distribution of Trust in the legal system is the same across categories of Czech Republic and Austria.	Independent-Samples Mann-Whitney U Test	.000	Reject the null hypothesis.
2	The distribution of Trust in police is the same across categories of Czech Republic and Austria.	Independent-Samples Mann-Whitney U Test	.073	Retain the null hypothesis.
3	The distribution of Trust in politics is the same across categories of Czech Republic and Austria.	Independent-Samples Mann-Whitney U Test	.000	Reject the null hypothesis.
4	The distribution of Trust in political parties is the same across categories of Czech Republic and Austria.	Independent-Samples Mann-Whitney U Test	.000	Reject the null hypothesis.
Asymptotic significances are displayed. The significance level is .05.				

Source: Own processing in SPSS IBM.

The results of the Independent-Samples Mann-Whitney U Test indicate significant differences in trust levels between the Czech Republic and Austria for most categories. Trust in the legal system, politics, and political parties shows statistically significant differences ($p = .000$), leading to the rejection of the null hypothesis, meaning that trust distributions in these areas are not the same across both countries. However, trust in the police does not show a significant difference ($p = .073$), leading to the acceptance of the null hypothesis, suggesting that trust levels in the police are similar in both countries. Further, the cross tabulation is depicted in appendix – 9.1.1 (Chi-Square output of Trust), confirming that there is difference between two countries in overall trust in legal system, politics and political parties, however, there is a no difference in trust in police across two countries.

Further, the analysis of satisfaction level across two countries takes place. The variables have also been taken from the ECS (2023) survey.

H_2: The trust in the public institutions (legal system, police, politics and political parties is equal in Czech Republic and Austria).

H_0: The opposite of ***H_2.***

Table 2: Mann-Whitney test for "Satisfaction level in economy, democracy, education, health care"

Hypothesis Test Summary				
	Null Hypothesis	**Test**	**Sig.**	**Decision**
1	The distribution of How satisfied with present state of economy in country is the same across categories of Czech Republic and Austria.	Independent-Samples Mann-Whitney U Test	.000	Reject the null hypothesis.
2	The distribution of How satisfied with the national government is the same across categories of Czech Republic and Austria.	Independent-Samples Mann-Whitney U Test	.000	Reject the null hypothesis.
3	The distribution of How satisfied with the way democracy works in country is the same across categories of Czech Republic and Austria.	Independent-Samples Mann-Whitney U Test	.081	Retain the null hypothesis.
4	The distribution of State of education in country nowadays is the same across categories of Czech Republic and Austria.	Independent-Samples Mann-Whitney U Test	.000	Reject the null hypothesis.
5	The distribution of State of health services in country nowadays is the same across categories of Czech Republic and Austria.	Independent-Samples Mann-Whitney U Test	.000	Reject the null hypothesis.
Asymptotic significances are displayed. The significance level is .05.				

Source: Own processing in SPSS IBM.

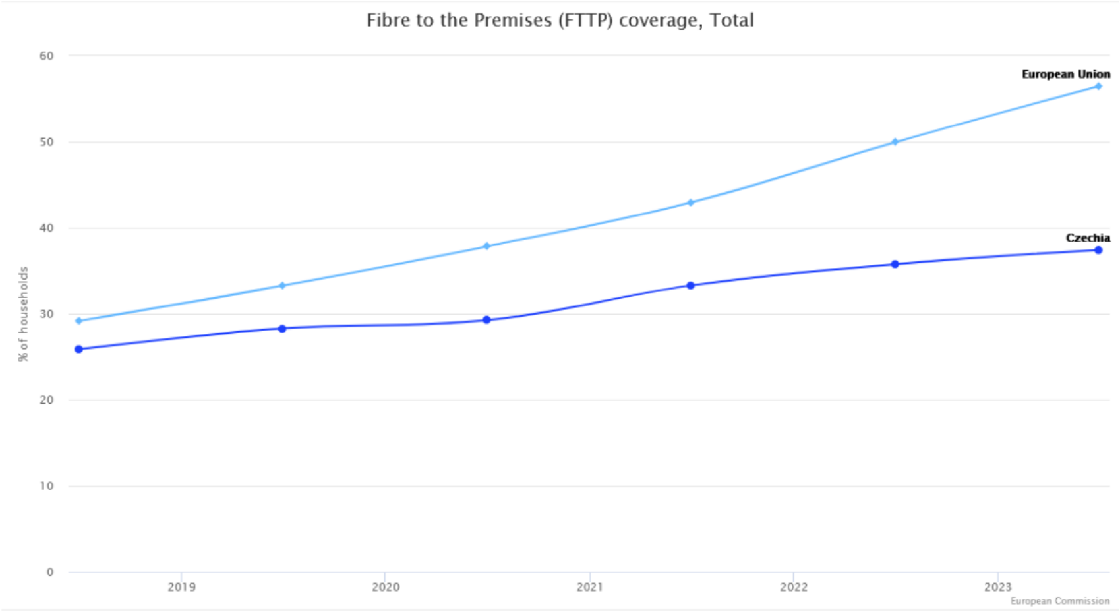
The results indicate that the satisfaction levels with the national economy, national government, education system, and healthcare services differ significantly between the two countries (p = .000 in each case), leading to the rejection of the null hypothesis. This suggests that respondents from Austria and the Czech Republic have distinct opinions on these aspects. However, the perception of how democracy functions in the country does not show a significant difference (p = .081), meaning that satisfaction with democracy is relatively similar between the two nations. Further, the cross tabulation is depicted in appendix – 9.1.2 (Chi-Square output of Satisfaction), confirming that there is difference between two countries in overall satisfaction economy, national government, education and health services. However, there is a no difference between how satisfied people with democracy across Czech Republic and Austria.

4.2 Development of Digital Context

4.2.1 Czech Republic

The Czech Republic has established a backbone optical infrastructure network extending to district cities; hence, future development and possible subsidy assistance will focus mostly on the lacking backhaul connections and access components of the networks. Consequently, public funding will be allocated to the two lowest hierarchical levels of the network to establish interconnection points with adequate capacity to achieve strategic objectives and to develop access networks that meet VHCN standards, preferably utilizing optical infrastructure. However, the Figure – 7, depicts the development of Fiber Coverage across Czech Republic from 2018 – 2024. It is seen that the development is still under the average of the European Union level.

Figure 7: Fiber Coverage in Czech Republic



Source: European Comission (2024, p. 74).

However, The Digital Czech Republic, established in 2018, comprises a framework of principles designed to guarantee the long-term success of the Czech Republic amidst the current digital revolution. This strategy encompasses the primary objectives of three subsidiary strategies:

(1) The Czech Republic's engagement in the European Union regarding the digital agenda;

(2) Digital public administration;
(3) The readiness and adaptation of Czech society and the economy for digital consumption.

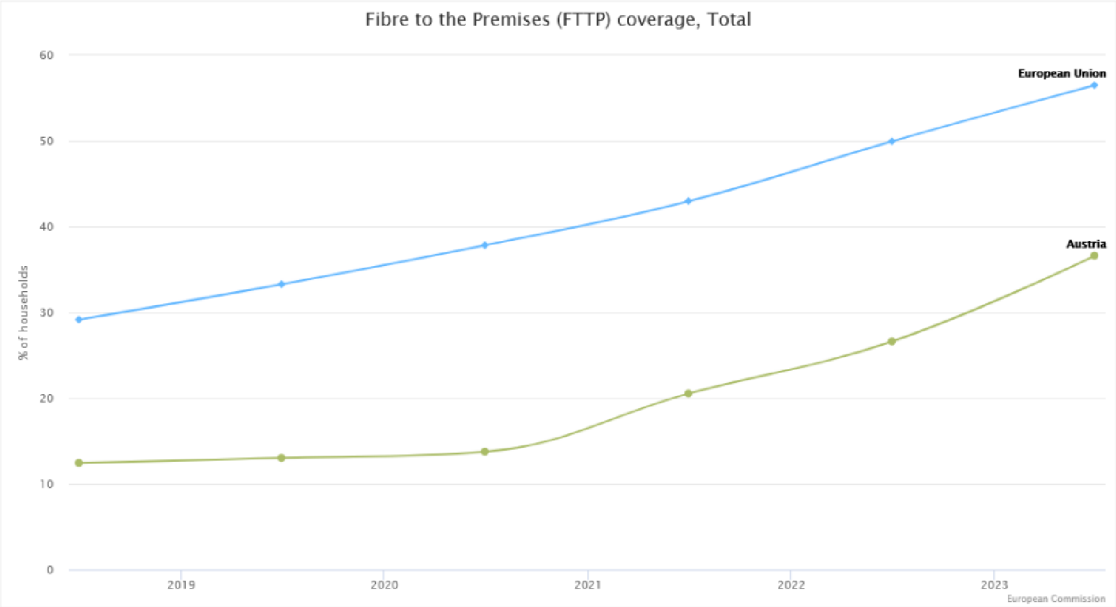
The strategy document titled Implementation and Development of 5G Networks in the Czech Republic was ratified in January 2020. It delineates a national plan for 5G implementation in the next years. This is integral to the Digital Czech Republic initiative and the Innovation Strategy of the Czech Republic for 2019-2030.

Despite all efforts, the advancement of Fibre to the Premises (FTTP) deployment from DESI 2021 to DESI 2023 is minimal, with a score of 4.13 points (EU average: 13.52 points) (European Comission, 2024, p. 74). The entire FTTP penetration of 37.44% is much lower than the EU's 56.5%. The implementation of high-speed internet poses more challenges in rural regions owing to insufficient economic incentives for network deployment. The FTTP deployment must accelerate significantly to provide gigabit connection for everybody by 2030. The rollout of 5G is progressing rapidly. The increase in "Overall 5G coverage" from DESI 2021 to DESI 2023 is notable, rising from 0% to 82.6%, significantly above the EU average. 66.67% of the 5G spectrum has been allocated, but the 26 GHz bandwidth remains unawarded (ibid, 2024, p. 74). The government intends to enhance 5G network coverage in rural regions under the National Recovery Plan (NRP). The NRP includes proposals for 5G signal coverage along the railway corridors of the Prague - Ostrava and Česká Třebová - Brno lines. This initiative might expedite the construction of more resilient 5G networks (ibid, 2024, p. 74).

4.2.2 Austria

Austria's National Broadband Plan (NBP), known as "Breitbandstrategie 2030", is aligned with the Gigabit Society and Digital Decade targets, building on the previous "Breitbandstrategie 2020". The plan aims to achieve full nationwide coverage of symmetric Gigabit connections by 2030, with a series of interim objectives to ensure gradual progress (European Comission, 2024, p. 41). These include achieving full coverage of ultrafast broadband (100 Mbps) and launching 5G services in all capital cities by 2020, establishing Austria as a 5G pilot country by early 2021, ensuring 5G availability along major traffic routes by 2023, and reaching nationwide Gigabit connectivity with full 5G coverage by 2025 (ibid, 2020, p. 41).

Figure 8: Fiber Coverage in Austria



Source: European Comission (2024, p. 40).

Complementing this initiative, Austria's 5G Strategy, introduced in April 2018, focuses on optimizing regulatory conditions to support the 5G rollout and harness its benefits for citizens, businesses, industries, and scientific research. The strategy follows a structured implementation approach, starting with initial pre-commercial 5G trials in 2018, followed by 5G deployment in all provincial capitals, and culminating in the expansion of 5G services along major traffic corridors by 2023, with the ultimate goal of achieving nationwide 5G coverage by 2025.

Austria has a highly advanced and efficient infrastructure, providing superior connection in transportation, communication, and public services. The Internet and telecommunications infrastructure is adequately developed to meet current demands.

Austria has extensive access to high-speed broadband internet. Regional and state administrations have invested in enhancing broadband infrastructure in rural regions. Austria has exceptional mobile coverage, with 4G and 5G networks accessible in the majority of urban and rural regions. Wi-Fi hotspots are prevalent in urban environments, such as cafés, restaurants, hotels, and public locations. Austria's broadband strategy and associated activities are advancing the enhancement of fiber coverage in rural and underserved regions. The Broadband Strategy 2030 sets lofty objectives, tackles the substantial expenses associated with fiber deployment, and aims to encourage the use of greater bandwidths.

Public policy and the anticipated government financing initiative will significantly enhance connectivity in Austria. Austria excels in the execution of the connectivity toolbox, having incorporated several best practices, while addressing various difficulties in broadband deployment, such as the establishment of a single information point and rights of way, throughout the toolbox's implementation. Austria's dedication to establishing a connectivity toolbox and overcoming barriers to broadband deployment is a commendable advancement toward securing a resilient digital infrastructure. Thus, based on the development dynamics of Czech Republic and Austria, the following hypothesis is set:

H_3: There is no significant difference (accessing internet from different locations, such as: home, workplace, on the move, other places) between the Czech Republic and Austria.

H_a: Opposite of ***H_3.***

Table 3: Mann-Whitney test for "Location access"

Hypothesis Test Summary

	Null Hypothesis	Test	Sig.	Decision
1	The distribution of Location able to access the internet: Home is the same across categories of Czech Republic and Austria.	Independent-Samples Mann-Whitney U Test	.016	Reject the null hypothesis.
2	The distribution of Location able to access the internet: Workplace is the same across categories of Czech Republic and Austria.	Independent-Samples Mann-Whitney U Test	.000	Reject the null hypothesis.
3	The distribution of Location able to access the internet: On the move is the same across categories of Czech Republic and Austria.	Independent-Samples Mann-Whitney U Test	.052	Retain the null hypothesis.
4	The distribution of Location able to access the internet: Some other place is the same across categories of Czech Republic and Austria.	Independent-Samples Mann-Whitney U Test	.005	Reject the null hypothesis.

Asymptotic significances are displayed. The significance level is .05.

Source: Own processing in SPSS IBM.

The Mann-Whitney U test results reveal significant differences in internet accessibility between the Czech Republic and Austria across various locations. Internet access at home (p

= 0.016), workplace (p = 0.000), and other locations (p = 0.005) shows statistically significant differences, indicating that these categories are distributed differently between the two countries. However, internet access while on the move (p = 0.052) does not show a significant difference, suggesting similar mobile internet accessibility in both countries. Overall, the findings highlight disparities in internet infrastructure and accessibility, particularly in fixed locations, while mobile internet access remains comparable. Further, the cross tabulation is depicted in appendix – 9.1.3 (Chi-Square output of Location able to access the internet), confirming that there is difference between two countries in overall location access of internet, particularly on inhouse, in workplace and other places. However, there is a no difference between location access of internet on the Move between Czech Republic and Austria.

Table 4: Mann-Whitney test for "Online/mobile communication"

Hypothesis Test Summary

	Null Hypothesis	Test	Sig.	Decision
1	The distribution of Online/mobile communication makes people feel closer to one another is the same across categories of Country.	Independent-Samples Mann-Whitney U Test	.000	Reject the null hypothesis.
2	The distribution of Online/mobile communication makes work and personal life interrupt each other is the same across categories of Country.	Independent-Samples Mann-Whitney U Test	.275	Retain the null hypothesis.
3	The distribution of Online/mobile communication makes it easy to coordinate and manage activities is the same across categories of Country.	Independent-Samples Mann-Whitney U Test	.000	Reject the null hypothesis.
4	The distribution of Online/mobile communication undermines personal privacy is the same across categories of Country.	Independent-Samples Mann-Whitney U Test	.000	Reject the null hypothesis.
5	The distribution of Online/mobile communication exposes people to misinformation is the same across categories of Country.	Independent-Samples Mann-Whitney U Test	.000	Reject the null hypothesis.
6	The distribution of Online/mobile communication makes it easy to work from home or place of choice is the same across categories of Country.	Independent-Samples Mann-Whitney U Test	.000	Reject the null hypothesis.

Asymptotic significances are displayed. The significance level is .05.

Source: Own processing in SPSS IBM.

The analysis compares perceptions of online and mobile communication between Austria and the Czech Republic, focusing on its social and professional impact. The results highlight significant differences in views on whether online communication enhances closeness among people, facilitates activity coordination, undermines privacy, and exposes users to

misinformation—all of which show statistical significance ($p = .000$), leading to a rejection of the null hypothesis. However, no significant difference is observed in the belief that online communication causes work and personal life to interfere ($p = .275$), indicating similar perceptions in both countries on this aspect.

4.2.3 CGI pillar in 2019

The following sub-chapter is focused on analysing the previous data in regards of internet usage, IT and digital skills across two countries. The data was withdrawn from GCI report (2019) and is the following, see Table – 5.

Table 5: CGI criteria across two countries (CZ and AT)

GCI 2019 Criterion	Value AT	Value CZ	Score AT	Score CZ	Rank AT	Rank CZ
3rd Pillar: ICT Adoption						
Mobile-cellular telephone subscriptions (per 100 pop)	123.5	119.2	100	99.3	56	66
Mobile-broadband subscriptions (per 100 pop)	88	88.1	N/A	N/A	49	47
Fixed-broadband Internet subscriptions (per 100 pop)	28.4	29.9	56.7	59.9	33	28
Internet users (% of adult population)	87.7	80.7	87.7	80.7	25	40
6th Pillar: Skills						
Mean years of schooling (years)	12.6	12.7	83.7	84.9	18	15
Digital skills among active population (scale 1-7)	4.8	4.8	63	63	40	41
Ease of finding skilled employees (scale 1-7)	4.5	3.2	57.6	37.5	48	134

Source: World Economic Forum (2020).

The GCI 2019 data highlight the differences and similarities in ICT adoption and skills development between Austria (AT) and the Czech Republic (CZ). Austria generally performs better in workforce-related indicators, while the Czech Republic shows strengths in broadband adoption and education levels.

In terms of ICT adoption, Austria has a slightly higher mobile-cellular subscription rate (123.5 per 100 people) compared to the Czech Republic (119.2), though their scores (100 vs. 99.3) and rankings (56th vs. 66th) are nearly identical. Mobile-broadband subscriptions are almost equal in both countries (88.0 in AT vs. 88.1 in CZ), with the Czech Republic ranking slightly higher (47th vs. 49th). In contrast, fixed-broadband subscriptions are higher in the Czech Republic (29.9 per 100 people vs. 28.4 in AT), leading to a better score (59.9 vs. 56.7) and a higher global rank (28th vs. 33rd). However, Austria has a higher percentage of internet users (87.7% of the adult population) than the Czech Republic (80.7%), placing it 25th globally compared to 40th for CZ.

Regarding skills development, mean years of schooling are similar in both countries (12.6 years in AT vs. 12.7 in CZ), with the Czech Republic ranking slightly higher (15th vs. 18th). Digital skills among the active population are identical in both countries (4.8 on a 1-7 scale), with nearly the same rank (40th in AT vs. 41st in CZ). However, Austria significantly outperforms the Czech Republic in the ease of finding skilled employees, ranking 48th with a score of 57.6, while the Czech Republic ranks 134th with a score of 37.5, indicating a major challenge in workforce availability.

Austria however, excels in workforce accessibility, internet penetration, and educational infrastructure, while the Czech Republic shows strengths in broadband adoption and slightly higher average years of schooling. Both countries have similar digital skill levels and mobile-broadband adoption, but the Czech Republic faces significant challenges in skilled labor availability, which could affect its economic competitiveness. Thus, the following hypothesis is set to be tested:

H_4: There is no significant difference (advanced search, pdf skills, internet usage in minutes and internet usage in frequency) between the Czech Republic and Austria.

H_a: Opposite of ***H_4***.

Table 6: Mann-Whitney test for "Digital skills and frequence of internet usage"

Hypothesis Test Summary

	Null Hypothesis	Test	Sig.	Decision
1	The distribution of Advanced search, how familiar is the same across categories of Czech Republic and Austria.	Independent-Samples Mann-Whitney U Test	.000	Reject the null hypothesis.
2	The distribution of PDF, how familiar is the same across categories of Czech Republic and Austria.	Independent-Samples Mann-Whitney U Test	.000	Reject the null hypothesis.
3	The distribution of Internet use, how often is the same across categories of Czech Republic and Austria.	Independent-Samples Mann-Whitney U Test	.000	Reject the null hypothesis.
4	The distribution of Internet use, in minutes is the same across categories of Czech Republic and Austria.	Independent-Samples Mann-Whitney U Test	.000	Reject the null hypothesis.

Asymptotic significances are displayed. The significance level is .05.

Source: Own processing in SPSS IBM.

All tested variables—familiarity with advanced search, familiarity with PDFs, frequency of internet use, and time spent online in minutes—show statistically significant differences ($p = .000$ for each), leading to the rejection of the null hypothesis in all cases. This suggests that the distributions of these variables differ between the two countries, meaning that users in Austria and the Czech Republic demonstrate distinct patterns in digital skills and online behaviour.

5 Results and Discussion

5.1 Hypothesis Testing for Internet Access Locations

The Mann-Whitney U tests for various internet access locations show significant differences between the two countries. The Czech Republic and Austria have statistically significant differences in internet access at home, in the workplace, and in other locations, with Austria generally reporting better connectivity. However, no significant difference is found for internet access "on the move," suggesting that both countries have similar mobile internet accessibility.

These findings imply that while mobile internet is relatively equal across both nations, fixed-line internet access remains a key area of divergence, with Austria demonstrating a higher level of infrastructure development in urban and rural settings. The Czech Republic's slower progress in FTTP deployment is a critical factor limiting its overall connectivity.

5.2 Hypothesis Testing for Digital Skills and Internet Usage

The Mann-Whitney U tests on digital skills and internet usage behaviors reveal notable differences between Austria and the Czech Republic in various aspects of digital proficiency. Both countries show significant differences in the familiarity with advanced search techniques, PDF usage, internet usage frequency, and time spent online. These results suggest that Austrians may have a slightly more advanced level of digital skills and greater engagement with digital tools compared to the Czech population.

The Czech Republic's digital skills, while strong, are not as widespread as in Austria, particularly in areas requiring advanced digital literacy, such as advanced search and efficient use of PDFs. The Czech Republic’s lower score in the ease of finding skilled employees further exacerbates this gap, emphasizing the importance of improving digital education and skills development to support the growing demand for digital services.\

5.3 Trust in Public Institutions

The analysis of trust in public institutions reveals significant differences between the Czech Republic and Austria. As hypothesized, the trust levels in legal systems, politics, and political parties are notably different across both countries. The Czech population shows a

considerably lower level of trust in their national government (19%), which is far below the OECD average (39%) and significantly lower than Austria's levels in many categories. This disparity may be attributed to historical, political, and social differences between the two countries. For example, Austria's public institutions benefit from a long-standing reputation for stability, transparency, and efficient governance, which could contribute to higher trust levels among its citizens. On the other hand, the Czech Republic, which underwent major political transitions in the last few decades, might still be grappling with issues related to political accountability, transparency, and corruption, factors that typically lower trust in government institutions.

Interestingly, trust in the police was not significantly different between the two countries, with a p-value of 0.073. This suggests that citizens in both countries have similar perceptions of law enforcement, which could be a reflection of comparable levels of police professionalism and effectiveness in both nations. It is important to note that although trust in the police is similar, the broader political context and overall trust in the government are still areas of divergence between the Czech Republic and Austria.

The findings of the Mann-Whitney U test highlight the complexity of trust dynamics, especially when considering the different facets of public institutions. The rejection of the null hypothesis for trust in the legal system, politics, and political parties suggests that citizens in Austria and the Czech Republic have divergent opinions about these institutions. This result aligns with the broader literature on trust, which indicates that countries with strong democratic institutions and stable governance tend to enjoy higher levels of trust in their legal systems and political structures (Bovens & Zouridis, 2020).

5.4 Satisfaction with Public Services

The second part of the analysis focused on satisfaction levels with various public services, including healthcare, education, and the economy. As hypothesized, significant differences were found between the Czech Republic and Austria in the satisfaction levels concerning healthcare services, education, and the economy. Austrian citizens reported significantly higher satisfaction with their healthcare system (81%), education (75%), and the state of the economy (results with p-values of 0.000). These results align with Austria’s strong performance in these sectors, which have benefited from consistent public investments and

a well-developed welfare system. The Austrian government has managed to maintain a high-quality healthcare system, accessible education, and a stable economy, leading to positive outcomes for citizens.

On the contrary, the Czech Republic has faced challenges in these areas, particularly in the healthcare system, where there have been ongoing concerns about funding, efficiency, and access to services. The lower satisfaction levels in the Czech Republic may be attributed to the relatively recent challenges the country has faced in terms of political reforms, healthcare system modernization, and economic stability. Although significant improvements have been made in these areas, Czech citizens still perceive their public services to be less effective than their Austrian counterparts.

The satisfaction with democracy showed no significant difference ($p = 0.081$), suggesting that both countries share relatively similar views on how democratic institutions function. This could be due to the overall high levels of democracy in both nations, with both countries being members of the European Union, which upholds democratic principles and governance standards. Despite the significant differences in trust and satisfaction with other public services, the democratic systems in the Czech Republic and Austria appear to inspire similar levels of contentment.

5.5 Limitations

It is important to note several limitations. First, the data from the 2023 ESC and OECD surveys were based on self-reported measures, which could introduce biases related to social desirability or individual perceptions of trust and satisfaction. Additionally, the cross-sectional nature of the survey limits the ability to assess causal relationships between the perception of a certain aspect and age, occupation, and income level. More personal data was disclosed that limited the research. Longitudinal studies would be helpful in understanding how trust and satisfaction evolve over time and what factors contribute to changes in these attitudes.

6 Conclusion

his thesis has explored the landscape of digital social communication in Austria and the Czech Republic, focusing on digital infrastructures, internet access, digital skills, and trust in public institutions. Through hypothesis testing and statistical data analysis, we have learned a great deal about the evolution of digital communication in these two nations in relation to society trust.

Based on the results, Austria has a better developed digital infrastructure with increased internet penetration rates and easier access to telecoms services. The Czech Republic still struggles with infrastructure development and digital inclusiveness even if it shows notable increases in digital skills and connection. Comparatively to the Czech Republic, Austria has a more equal distribution of access points and a greater degree of digital competence among its population according the statistical tests on internet access locations and digital abilities. One important determinant of digital communication practices in both nations turned out to be public institution trust. Higher institutional trust people are more inclined to participate in online governmental communication, hence the Chi-Square test findings reveal a noteworthy association between trust in national institutions and digital involvement. Still, the degree of public service satisfaction differed between the two countries; Austria showed more general levels than the Czech Republic.

The CGI pillar in 2019 was also investigated in the paper as it offered further proof of the structural variations between the two nations in digital governance and e-participation. Although both countries have advanced their digital government projects, Austria seems to have more flawless connection between public administration and digital services. This bachelor's thesis notes some limits even with these results. The dependence on secondary data sources might not completely reflect real-time digital activity patterns, and several statistical assumptions could affect the validity of the findings. Future studies should include qualitative methods like user interviews to augment quantitative findings and provide a more whole knowledge of digital communication dynamics.

7 References

[1]. Anderson, C. J. and Singer, M. M. (2008), 'The sensitive left and the impervious right: multilevel models and the politics of inequality, ideology, and legitimacy in Europe', Comparative Political Studies 41(4–5), 564–599.

[2]. Arnold, C., Sapir, E. V., and Zapryanova, G. (2012), 'Trust in the institutions of the European Union: A crosscountry examination', in L. Beaudonnet and D. Di Mauro (Eds.), 'Beyond euro-skepticism: Understanding attitudes towards the EU, European Integration online Papers (EIoP), Special Mini-Issue 2, 16(8)

[3]. Bonasia, M., Canale, R. R., Liotti, G., and Spagnolo, N. (2016), 'Trust in institutions and economic indicators in the eurozone: the role of the crisis', Engineering Economics, 27(1), pp. 4–12.

[4]. Bordi, L., Okkonen, J., Mäkiniemi, J.P., & Heikkilä-Tammi, K. (2018). Communication in the digital work environment: Implications for wellbeing at work. Nordic Journal of Working Life Studies, 8(3), 29–48.

[5]. Campbell, W. R. (2004), 'The sources of institutional trust in East and West Germany: civic culture or economic performance?', German Politics 13(3), pp. 401–418.

[6]. Chin, P.Y., Evans, N., Liu, C.Z., & Choo, K-K.R. (2019). Understanding Factors Influencing Employees' Consumptive and Contributive Use of Enterprise Social Networks. Information Systems Frontiers, 22(6), 1357–1376.

[7]. Conti, N., and Memoli, V. (2017), 'How the media make European citizens more eurosceptical', in M. Caiani and S. Guerra (Eds.), Euroscepticism, Democracy and the Media. Palgrave Studies in European Political Sociology, Palgrave Macmillan, London

[8]. Czech Statistical Office CZSO (2023). Overview of ICT statistics. [online]. Available at: https://csu.gov.cz/documents/10180/215504674/212032-23.pdf/3a5dfeee-1679-407a-8aac-690a617b4e6c?version=1.0

[9]. Digital Economy and Society Index (2022). Europe's overall digital performance and tracks the progress of EU countries on their digital competitiveness. [online]. Available at: Digital Economy and Society Index (DESI) 2022 | Shaping Europe's digital future

[10]. Dziembek, D., & Turek, T. (2018). Characteristics and application of Unified Communications as a Service (UCaaS) in enterprises. Informatyka Ekonomiczna, 4(50), 47–65.

[11]. EPRS (European Parliamentary Research Service) (2016), Major changes in European public opinion regarding the European Union: Explanatory study, Brussels

[12]. European Comission (2024). Study on National Broadband Plans in the EU-27. [online]. Available at: https://www.researchgate.net/profile/Carolina-Perpina-Castillo/publication/351525320_Broadband_accessibility_and_quality_connection_in_Europe_by_urban-_rural_typology_including_remoteness/links/609c07b5299bf10fbb27dc73/Broadband-accessibility-and-quality-connection-in-Europe-by-urban-rural-typology-including-remoteness.pdf

[13]. European Union (2024). Country Profile: Astria – overview. [online]. Available at: Austria – EU country profile | European Union

[14]. Euroskop (2024). Achievements of the Czech Presidency in the digital and telecommunications sectors. [online]. Available at: Achievements of the Czech Presidency in the field of digital and telecommunications - Making Europe

[15]. Ewing, M., Men, L. R., & O'Neil, J. (2019). Using Social Media to Engage Employees: Insights from Internal Communication Managers. International Journal of Strategic Communication, 13(2), 110–132.

[16]. Fikry, A., & Abdul Ghani Mukhtar, Z. (2012). Unified communication: it's all between you and me. Business Strategy Series, 13(4), 168–172.

[17]. Fukuyama, F. (1995), Trust: The social virtues and the creation of prosperity, Free Press Paperbacks, New York.

[18]. Gomez, R. (2015), 'The economy strikes back: Support for the EU during the Great Recession', Journal of Common Market Studies, 53(3), pp. 577–592.

[19]. Guenzi, P., & Habel, J. (2020). Mastering the Digital Transformation of Sales. California Management Review, 62(4), 57–85.

[20]. Hobolt, S. B. (2012), 'Citizen satisfaction with democracy in the European Union', Journal of Common Market Studies, 50(S1), pp. 88–105

[21]. Kaplan, A.M., & Haenlein, M. (2010). Users of the world, unite! The challenges and opportunities of social media. Business Horizons, 53(1), 59-68.

[22]. Karp, J., Banducci, S. A., and Bowler, S. (2003), 'To know it is to love it? Satisfaction with democracy in the European Union', Comparative Political Studies, 36(3), pp. 271–292.

[23]. Kovaitė, K., Šūmakaris, P., & Stankevičienė, J. (2020). Digital communication channels in Industry 4.0 implementation: the role of internal communication. Management, 25(1), 171–191.

[24]. Kruse, Jörn. (2007) Years of Telecommunications Liberalization in Austria'. Rundfunk und Telekom Regulierungs-GmbH. [online]. Available at: https://www.rtr.at/TKP/aktuelles/publikationen/publikationen/Band2-2007.pdf

[25]. Kubacz-Szumska, J., & Szumski, O. (2021). Cloud Communications During the Pandemic From the Perspective of Collaboration Platforms. Problemy Zarządzania – Management Issues, 3/2021(93), 138–149.

[26]. Leonardi, P.M., Huysman, M., & Steinfield, C. (2013). Enterprise Social Media: Definition, History, and Prospects for the Study of Social Technologies in Organizations. Journal of Computer-Mediated Communication, 19(1), 1–19

[27]. Lipiäinen, H.S.M., Karjaluoto, H.E., & Nevalainen, M. (2014). Digital channels in the internal communication of a multinational corporation. Corporate Communications, 19(3), 275–286.

[28]. Manzi, G., Stefanizzi, S., and Ferrari, P. A. (2016), 'In the end, will we all be Europeans? A two-phase analysis of citizens' sentiment towards the EU', Quality and Quantity, 50(6), pp. 2535–2551.

[29]. Medve-Bálint, G. and Boda, Z. (2014), 'The poorer you are, the more you trust? The effect of inequality and income on institutional trust in east-central Europe', Sociologický Časopis – Czech Sociological Review, 50(3), p. 419.

[30]. Mungiu-Pippidi, A., Dadašov, R., Fazekas, M., Tóth, I. J., Kocsis, G., Jancsics, D. et al (2015), Public integrity and trust in Europe, European Research Centre for Anti-Corruption and State-Building, Berlin.

[31]. Muñoz, J., Torcal, M., and Bonet, E. (2011), 'Institutional trust and multilevel government in the European Union: Congruence or compensation?' European Union Politics, 12(4), pp. 551–574.

[32]. NUKÍB (2024). Thanks to the work of NÚKIB during CZ PRES, EU cybersecurity has increased. [online]. Available at: National Cyber and Information Security Agency - Thanks to the work of NÚKIB during CZ PRES, EU cybersecurity has increased

[33]. Obydenkova, A.V., and Arpino, B. (2017), 'Corruption and trust in the European Union and national institutions: changes over the great recession across European states', Journal of Common Market Studies, 56(3) pp. 594–611.

[34]. OECD (2015), In it together: Why less inequality benefits all, OECD Publishing, Paris, http://dx.doi.org/10.1787/9789264235120-en.

[35]. OECD (2021). OECD Report on Public Communication. [online]. Available at: https://www.oecd.org/content/dam/oecd/en/publications/reports/2021/12/oecd-report-on-public-communication_b74311bc/22f8031c-en.pdf

[36]. OECD (2024). Government at Glance. [online]. Available at: https://www.oecd.org/content/dam/oecd/en/publications/reports/2023/06/government-at-a-glance-2023-country-notes_a95d10b5/austria_73941cb0/384afb87-en.pdf

[37]. Radu, L. (2016), 'Unconditional trust? Public opinion towards the EU in Romania', Journal of Media Research – Revista de Studii Media, 9(1), pp. 60–79.

[38]. Rodríguez, R., Svensson, G., & Mehl, E.J. (2020). Digitalization process of complex B2B sales processes – Enablers and obstacles. Technology in Society, 62, 1-12.

[39]. Sashi, C.M. (2020). Digital communication, value co-creation and customer engagement in business networks: a conceptual matrix and propositions. European Journal of Marketing, 55(6), 1643-1663.

[40]. Sparviero, S., Wasner, R., Tales, T. and Aleksevych, M. (2024). Media and Internet Concentration in Austria, 2019-2022. [online]. Available at: DOI: 10.22215/gmicp/2024.7.040

[41]. Torcal, M., Muñoz, J., and Bonet, E. (2012), 'Trust in the European Parliament: From affective heuristics to rational cueing, in D. Sanders, P. Magalhães, and G. Tóka (Eds.), Citizens and the European polity: Mass attitudes towards the European and national polities, Oxford University Press, Oxford.

[42]. Venkatesh, V., Morris, M. G., Davis, G. B., & Davis, F. D. (2003). User Acceptance of Information Technology: Toward a Unified View. MIS Quarterly, 27(3), 425– 478.

[43]. Vlada (2024). Programové prohlášení vlády. [online]. Available at: https://en.ejo.ch/media-politics/the-czech-media-landscape

[44]. Wang, L. and Gordon, P. (2011), 'Trust and institutions: A multilevel analysis', The Journal of Socio-Economics, 40(5), pp. 583–593.

[45]. Weber, M.S., & Shi, W. (2016). Enterprise Social Media. In: C.R. Scott, J.R. Barker, T. Kuhn, J. Keyton, P.K. Turner, & L.K. Lewis, eds. International Encyclopedias of Communication. John Wiley & Sons. pp. 1-9.

[46]. Wengler, S., Hildmann, G., & Vossebein, U. (2021). Digital transformation in sales as an evolving process. Journal of Business & Industrial Marketing, 36(4), 599- 614.

[47]. World Economic Forum (2020). CGI. [online]. Available at: https://www.weforum.org/publications/the-global-competitiveness-report-2020/

[48]. Yee, R.W.Y., Miquel-Romero, M.J., & Cruz-Ros, S. (2021). Why and how to use enterprise social media platforms: The employee's perspective. Journal of Business Research, 137, 517-526.

8 List of pictures, tables, graphs and abbreviations

8.1 List of tables

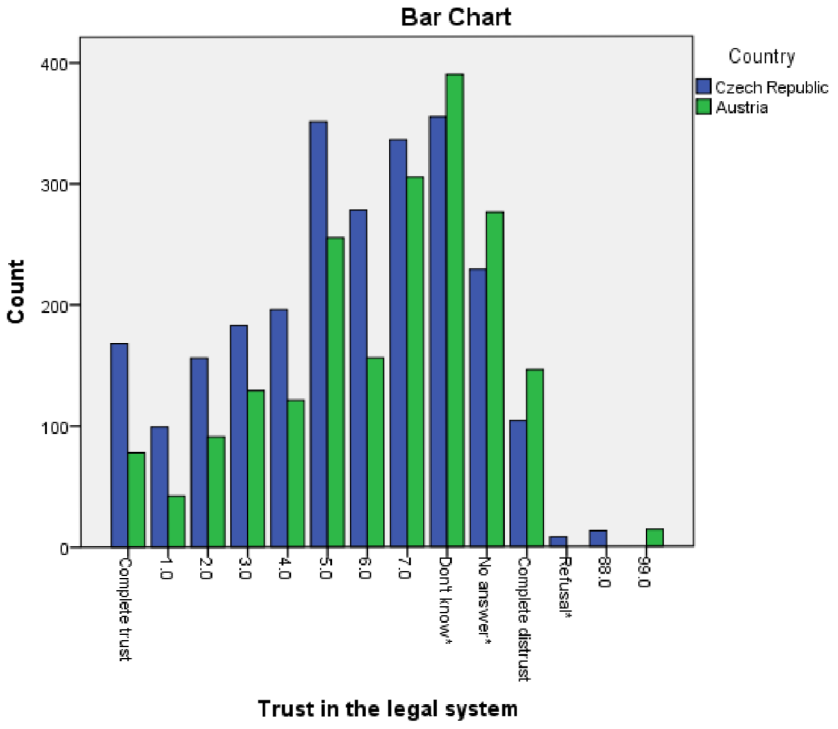
Table 1: Mann-Whitney test for "Trust" 37
Table 2: Mann-Whitney test for "Satisfaction level in economy, democracy, education, health care" 38
Table 3: Mann-Whitney test for “Location access” 42
Table 4: Mann-Whitney test for “Online/mobile communication” 43
Table 5: CGI criteria across two countries (CZ and AT) 45
Table 6: Mann-Whitney test for “Digital skills and frequence of internet usage” 46

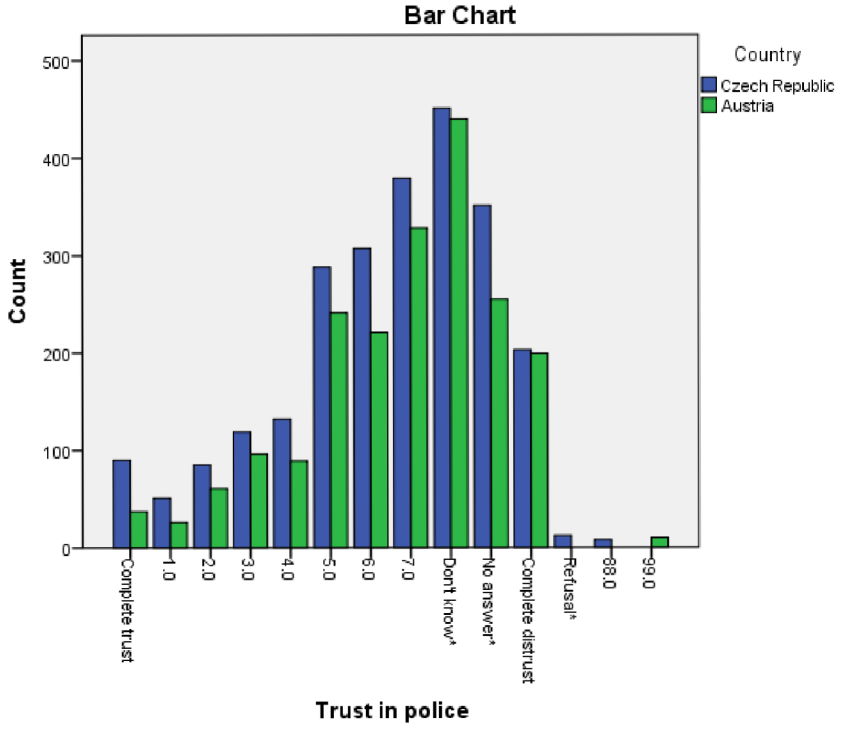
8.2 List of Figures

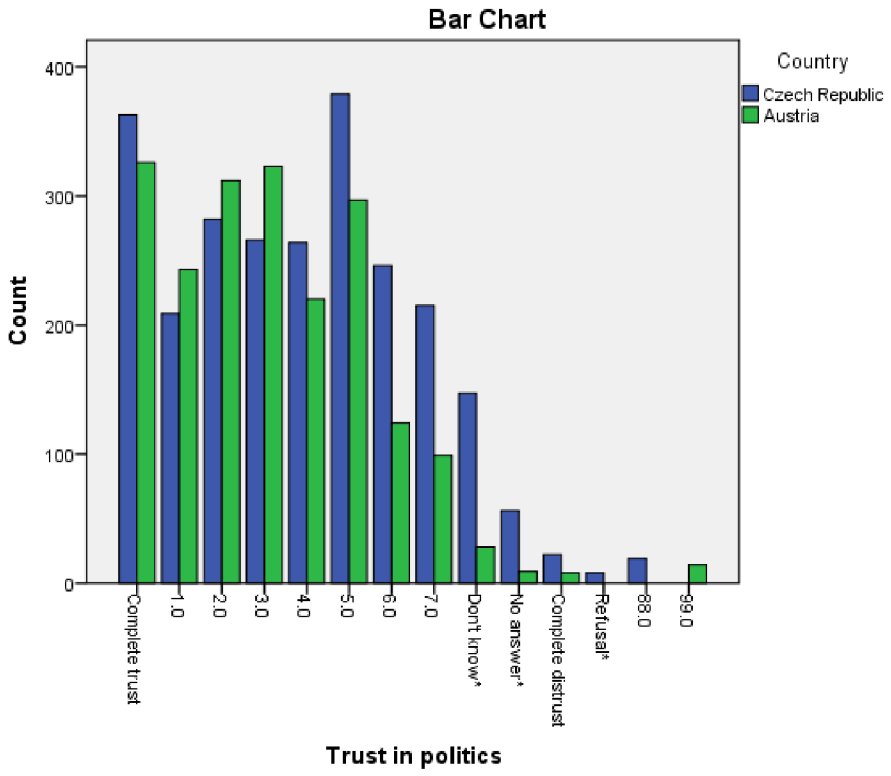
Figure 1: Top three digital communication channels used by CoGs 21
Figure 2: Digital communication structures 22
Figure 3: Mergers and acquisitions in the Telecom and internet sector since 2000 26
Figure 4: DESI Index 28
Figure 5: Share of population who indicate different levels of trust across EU 35
Figure 6: Trust in public institutions of Austria 36
Figure 7: Fiber Coverage in Czech Republic 39
Figure 8: Fiber Coverage in Austria 41

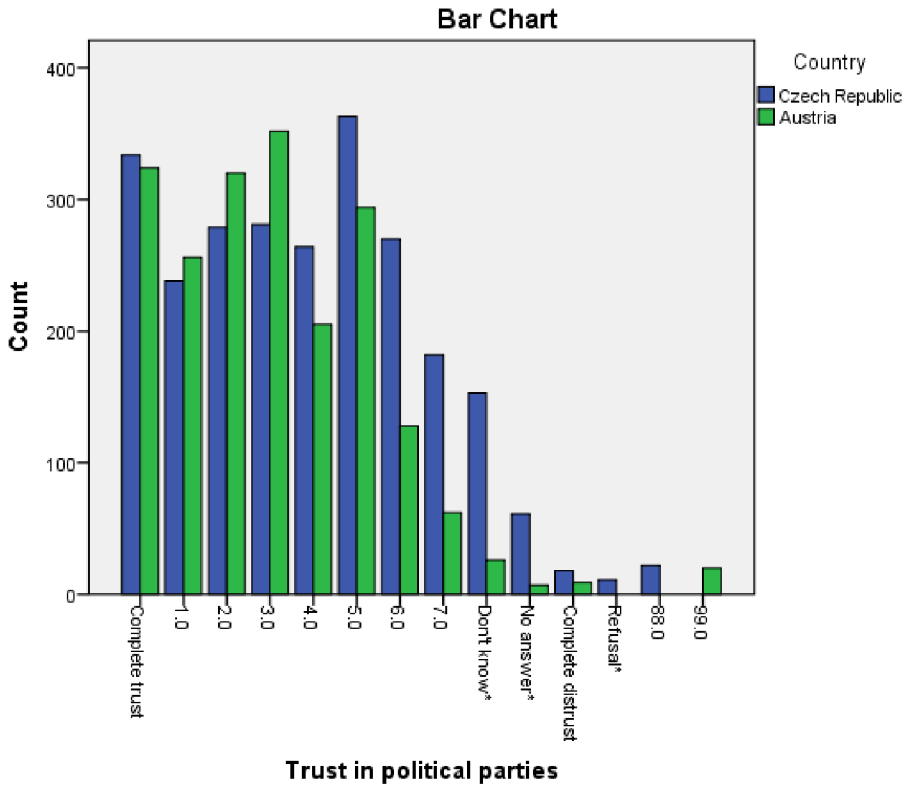
9 Appendix

9.1 Trust






Bar Chart
Count
400
300
200
100
0
Country
Czech Republic
Austria
Complete trust
1.0
2.0
3.0
4.0
5.0
6.0
7.0
Don't know*
No answer*
Complete distrust
Refusal*
88.0
99.0
Trust in politics


Bar Chart
Count
400
300
200
100
0
Country
Czech Republic
Austria
Complete trust
1.0
2.0
3.0
4.0
5.0
6.0
7.0
Don't know*
No answer*
Complete distrust
Refusal*
88.0
99.0
Trust in political parties

9.1.1 Chi-Square Output

Trust in the legal system *Country

Chi-Square Tests					
	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig.(1-sided)
Pearson Chi-Square	150.975[a]	13	.000		
Likelihood Ratio	165.160	13	.000		
Linear-by-Linear Association	10.963	1	.001		
N of Valid Cases	4479				
a. 2 cells (7.1%) have expected count less than 5. The minimum expected count is 3.58.					

Trust in police *Country

Chi-Square Tests					
	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig.(1-sided)
Pearson Chi-Square	63.005[a]	13	.057		
Likelihood Ratio	74.850	13	.002		
Linear-by-Linear Association	.448	1	.503		
N of Valid Cases	4479				
a. 3 cells (10.7%) have expected count less than 5. The minimum expected count is 3.58.					

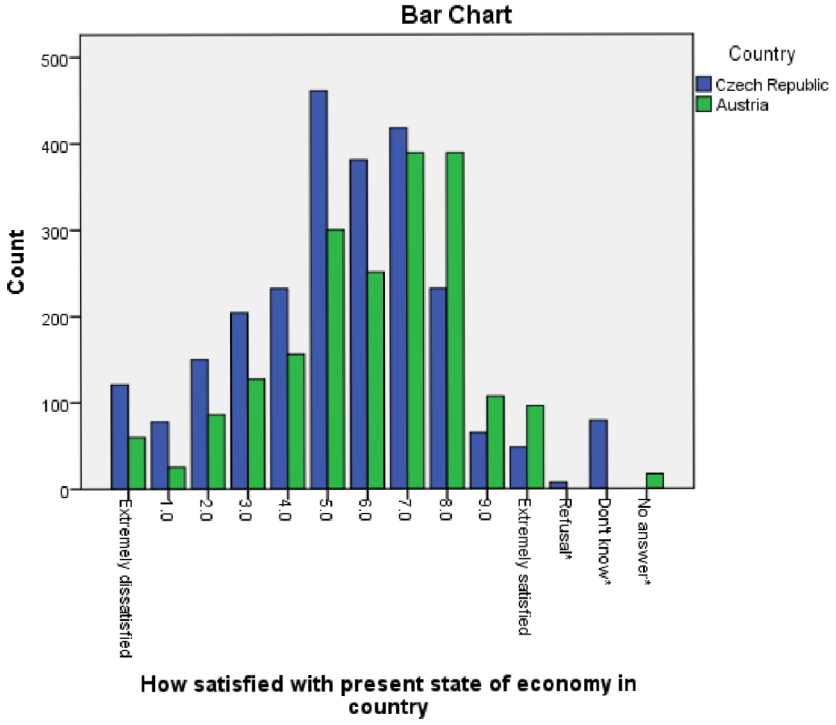
Trust in political parties * Country

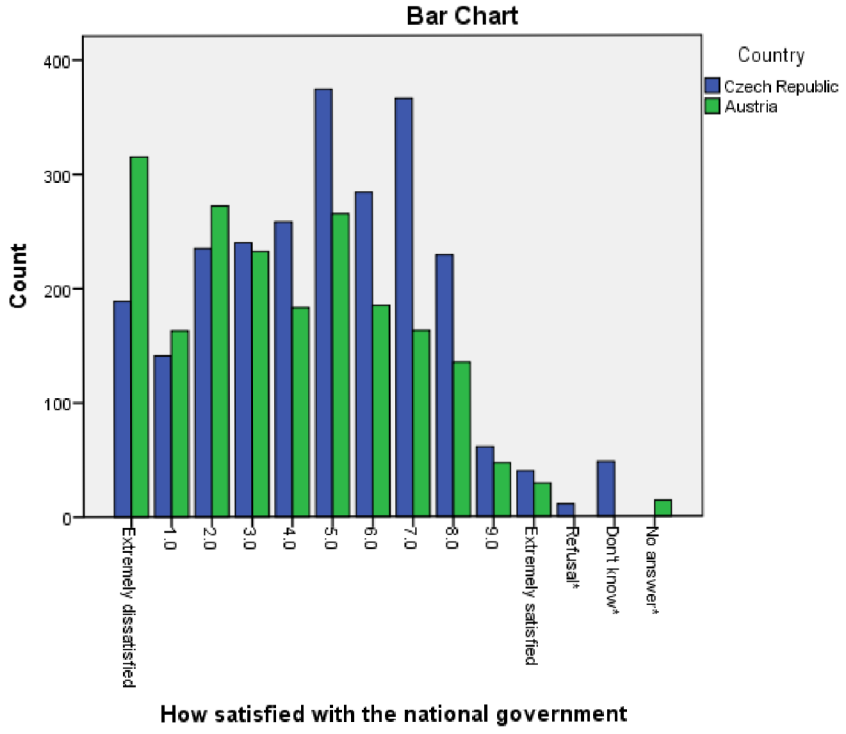
Chi-Square Tests					
	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig.(1-sided)
Pearson Chi-Square	278.065[a]	13	.000		
Likelihood Ratio	315.226	13	.000		
Linear-by-Linear Association	12.154	1	.000		
N of Valid Cases	4479				
a. 1 cells (3.6%) have expected count less than 5. The minimum expected count is 4.92.					

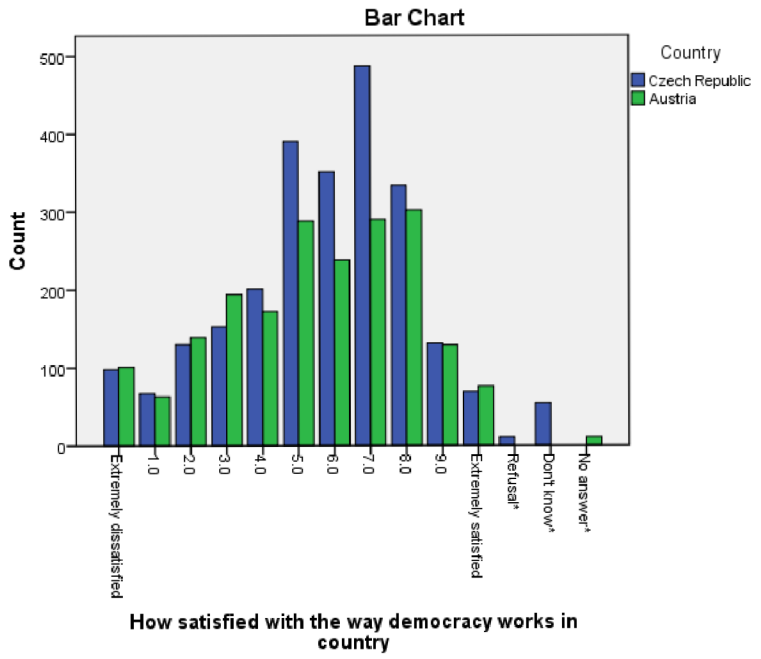
Trust in politics * Country

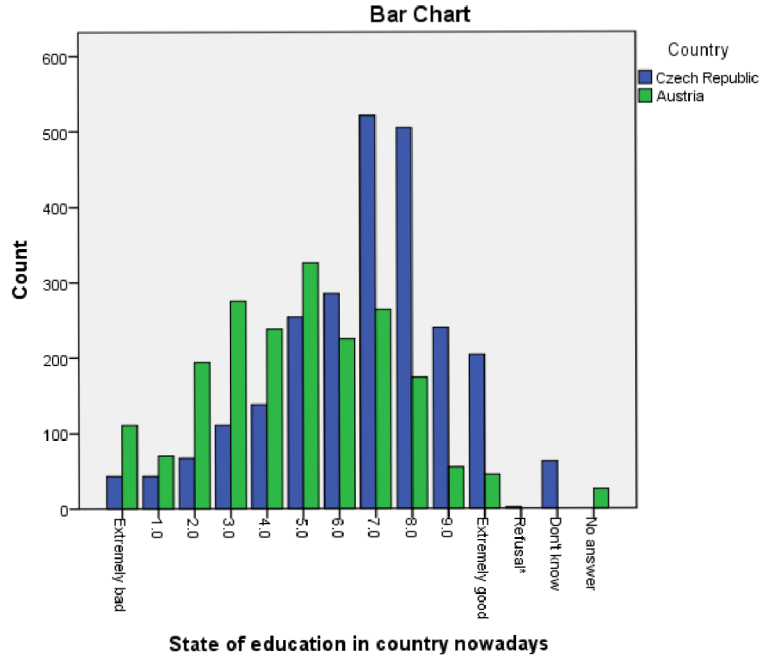
Chi-Square Tests					
	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig.(1-sided)
Pearson Chi-Square	223.584[a]	13	.000		
Likelihood Ratio	250.574	13	.000		
Linear-by-Linear Association	15.657	1	.000		
N of Valid Cases	4479				
a. 2 cells (7.1%) have expected count less than 5. The minimum expected count is 3.58.					

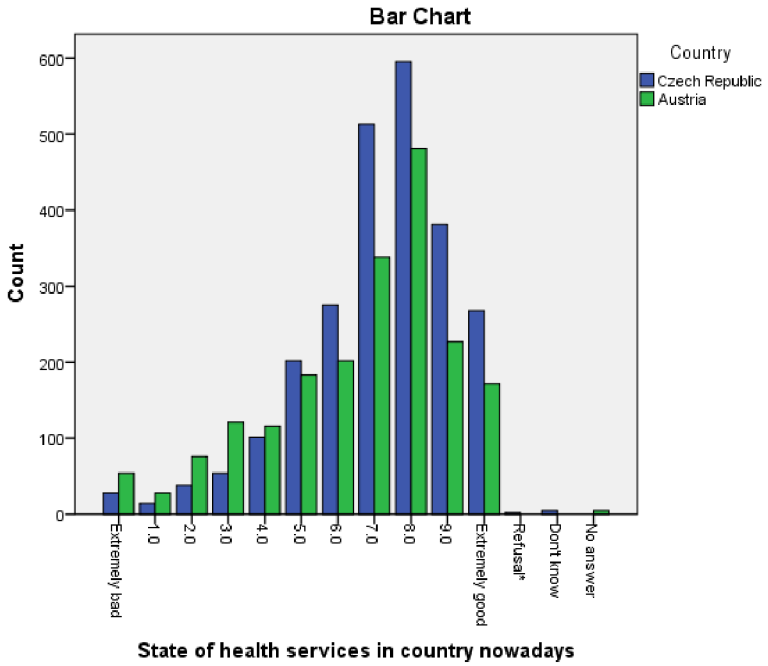
9.2 Satisfaction with economy, national government, democracy, education and health services






Bar Chart
Count
500
400
300
200
100
0
Country
Czech Republic
Austria
Extremely dissatisfied
1.0
2.0
3.0
4.0
5.0
6.0
7.0
8.0
9.0
Extremely satisfied
Refusal*
Don't know*
No answer*
How satisfied with the way democracy works in country


Bar Chart
Count
600
500
400
300
200
100
0
Country
Czech Republic
Austria
Extremely bad
1.0
2.0
3.0
4.0
5.0
6.0
7.0
8.0
9.0
Extremely good
Refusal*
Don't know
No answer
State of education in country nowadays



9.2.1 Chi-Square Output for "Satisfaction"

How satisfied with present state of economy in country * Country

Chi-Square Tests					
	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig.(1-sided)
Pearson Chi-Square	281.971[a]	13	.000		
Likelihood Ratio	322.063	13	.000		
Linear-by-Linear Association	9.818	1	.002		
N of Valid Cases	4479				
a. 2 cells (7.1%) have expected count less than 5. The minimum expected count is 3.13.					

How satisfied with the national government * Country

Chi-Square Tests					
	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig.(1-sided)
Pearson Chi-Square	219.413[a]	13	.000		
Likelihood Ratio	248.048	13	.000		
Linear-by-Linear Association	42.798	1	.000		
N of Valid Cases	4479				
a. 1 cells (3.6%) have expected count less than 5. The minimum expected count is 4.92.					

How satisfied with the way democracy works in country * Country

Chi-Square Tests					
	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig.(1-sided)
Pearson Chi-Square	123.935[a]	13	.067		
Likelihood Ratio	152.575	13	.000		
Linear-by-Linear Association	29.677	1	.000		
N of Valid Cases	4479				
a. 2 cells (7.1%) have expected count less than 5. The minimum expected count is 4.92.					

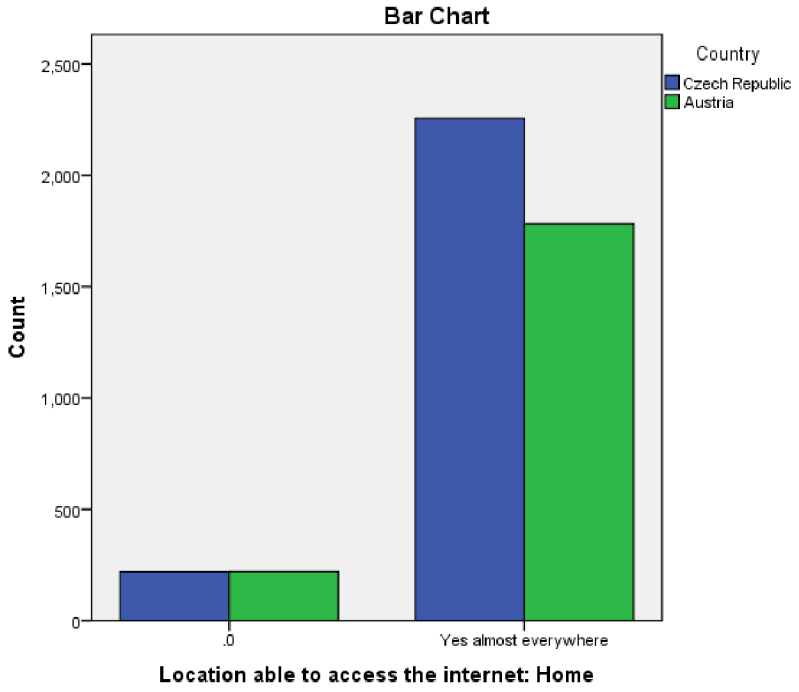
State of education in country nowadays * Country

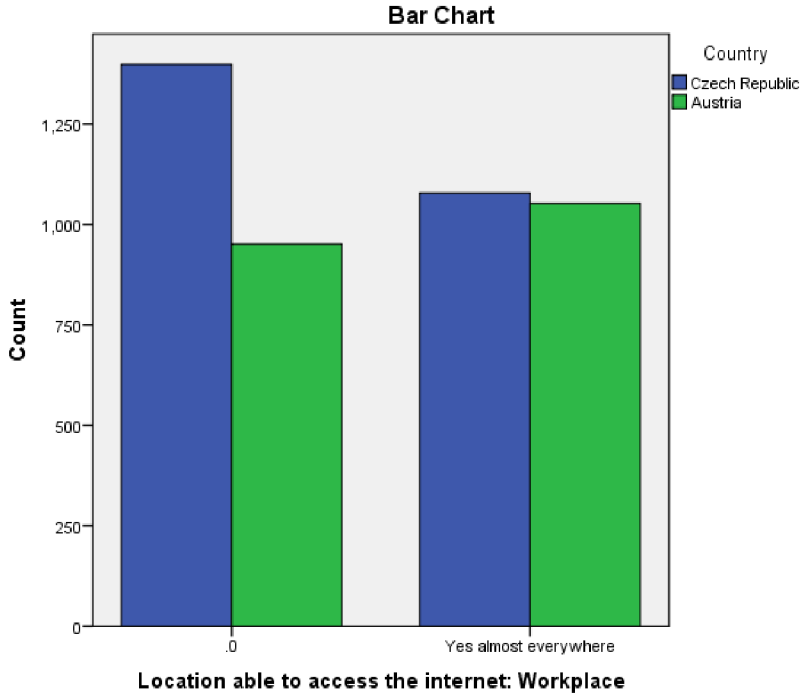
Chi-Square Tests					
	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig.(1-sided)
Pearson Chi-Square	722.697[a]	13	.000		
Likelihood Ratio	782.308	13	.000		
Linear-by-Linear Association	55.678	1	.000		
N of Valid Cases	4479				
a. 2 cells (7.1%) have expected count less than 5. The minimum expected count is .89.					

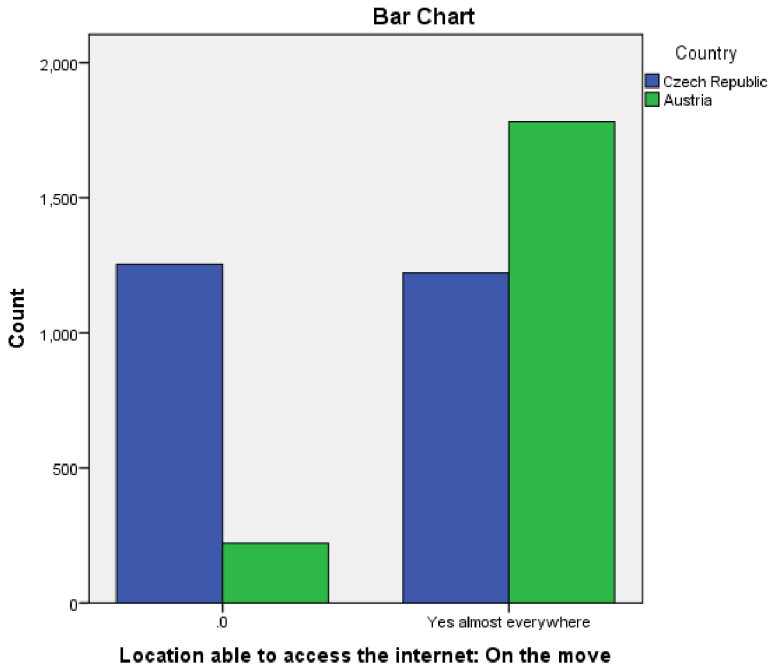
State of health services in country nowadays * Country

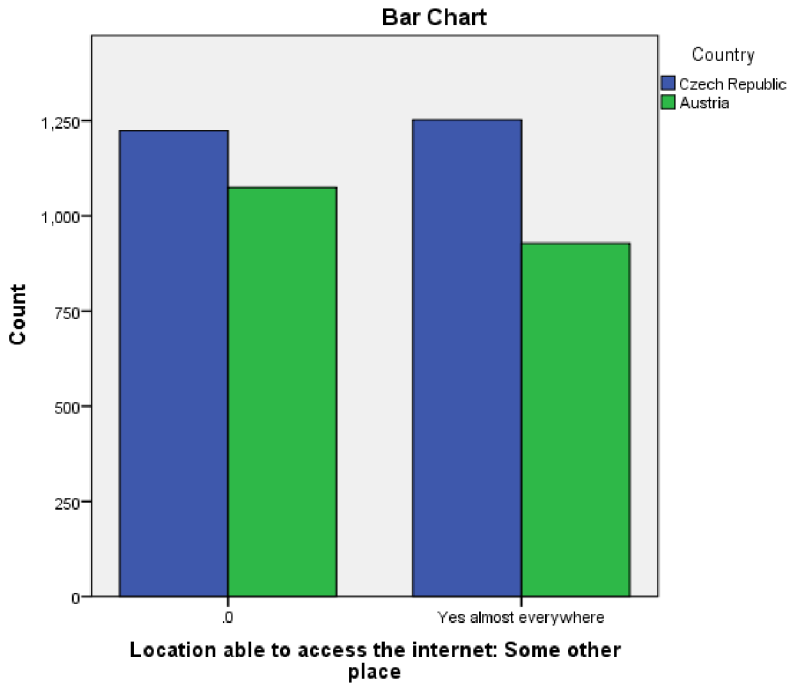
Chi-Square Tests					
	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig.(1-sided)
Pearson Chi-Square	135.958[a]	13	.000		
Likelihood Ratio	141.054	13	.000		
Linear-by-Linear Association	18.106	1	.000		
N of Valid Cases	4479				
a. 6 cells (21.4%) have expected count less than 5. The minimum expected count is .89.					

9.3 Location and ability to access internet






Bar Chart
Country
Czech Republic
Austria
Count
2,000
1,500
1,000
500
0
.0
Yes almost everywhere
Location able to access the internet: On the move


Bar Chart
Country
Czech Republic
Austria
Count
1,250
1,000
750
500
250
0
.0
Yes almost everywhere
Location able to access the internet: Some other place

9.3.1 Chi-Square Output of Location Access of Internet

Location able to access the internet: Home * Country

Chi-Square Tests					
	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	5.756[a]	1	.016		
Continuity Correction[b]	5.517	1	.019		
Likelihood Ratio	5.727	1	.017		
Fisher's Exact Test				.018	.010
Linear-by-Linear Association	5.755	1	.016		
N of Valid Cases	4479				
a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 197.21.					
b. Computed only for a 2x2 table					

Location able to access the internet: Workplace * Country

Chi-Square Tests					
	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	35.828[a]	1	.000		
Continuity Correction[b]	35.468	1	.000		
Likelihood Ratio	35.856	1	.000		
Fisher's Exact Test				.000	.000
Linear-by-Linear Association	35.820	1	.000		
N of Valid Cases	4479				
a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 952.53.					
b. Computed only for a 2x2 table					

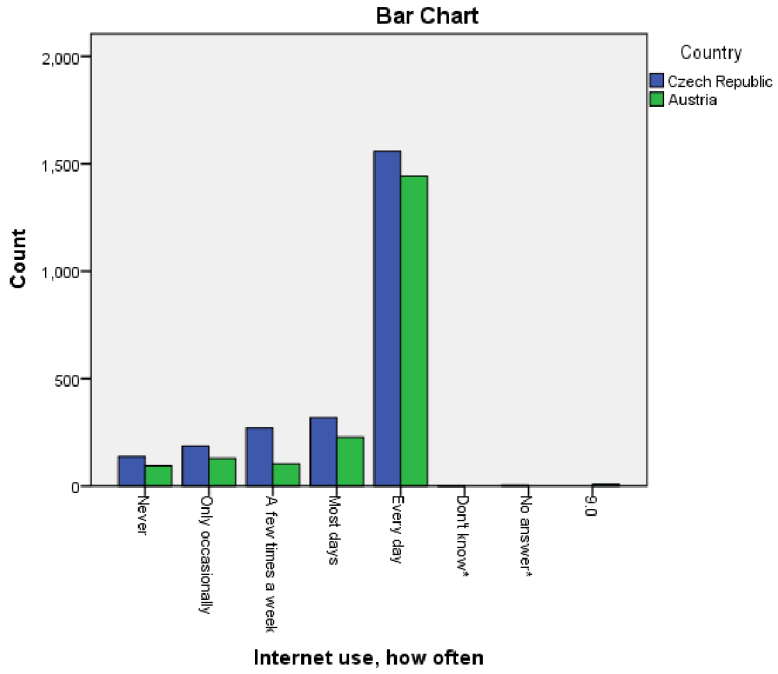
Location able to access the internet: On the move * Country

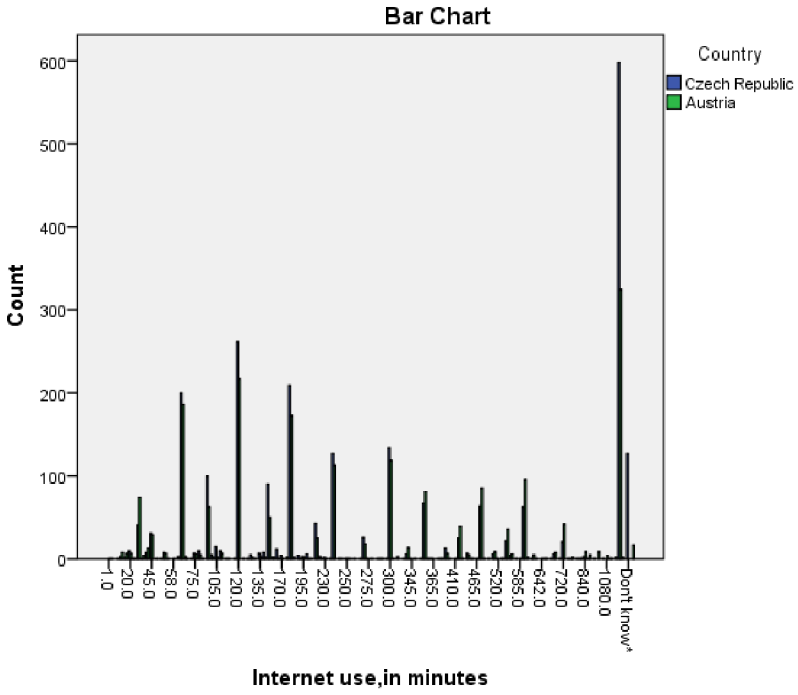
Chi-Square Tests					
	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	786.667[a]	1	.000		
Continuity Correction[b]	784.874	1	.000		
Likelihood Ratio	853.623	1	.000		
Fisher's Exact Test				.054	.051
Linear-by-Linear Association	786.491	1	.000		
N of Valid Cases	4479				
a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 659.62.					
b. Computed only for a 2x2 table					

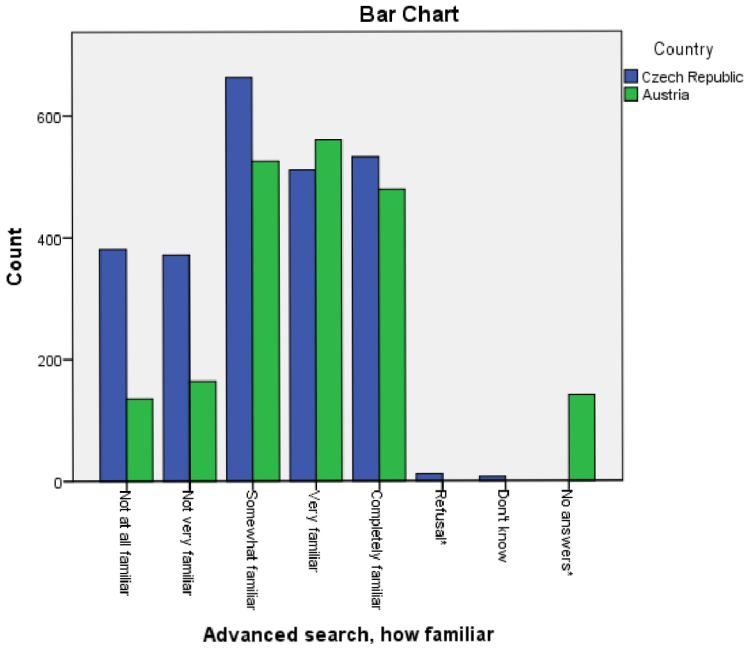
Location able to access the internet: Some other place * Country

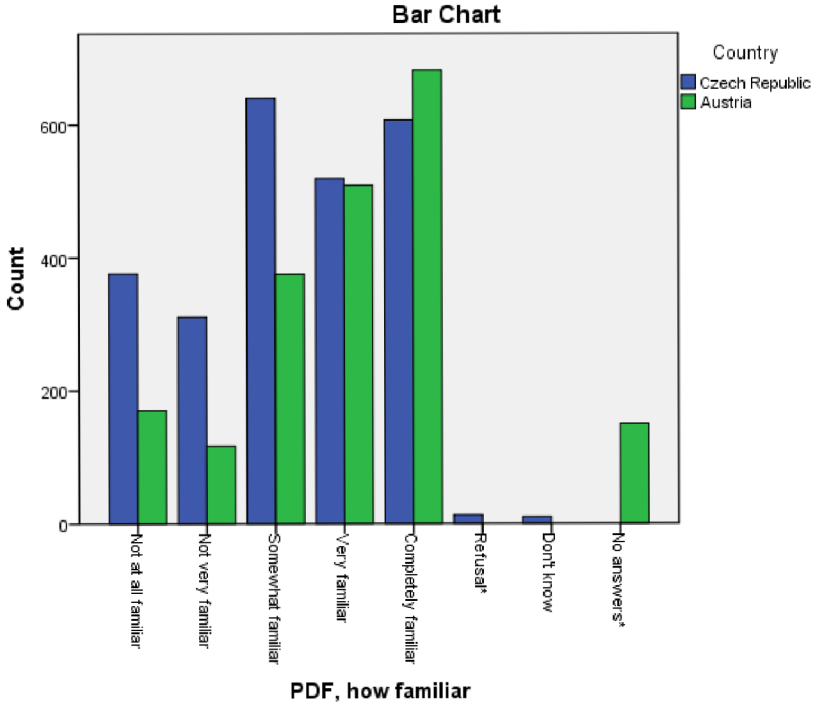
Chi-Square Tests					
	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	7.949[a]	1	.005		
Continuity Correction[b]	7.780	1	.005		
Likelihood Ratio	7.953	1	.005		
Fisher's Exact Test				.005	.003
Linear-by-Linear Association	7.947	1	.005		
N of Valid Cases	4479				
a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 974.89.					
b. Computed only for a 2x2 table					

9.4 Usage of internet a day, its frequency, PDF familiarity and advanced search






Bar Chart
Country
Czech Republic
Austria
Count
600
400
200
0
Not at all familiar
Not very familiar
Somewhat familiar
Very familiar
Completely familiar
Refusal*
Don't know
No answers*
Advanced search, how familiar


Bar Chart
Country
Czech Republic
Austria
Count
600
400
200
0
Not at all familiar
Not very familiar
Somewhat familiar
Very familiar
Completely familiar
Refusal*
Don't know
No answers*
PDF, how familiar

9.4.1 Chi-Square test for Internet usage, frequency, PDF familiarity and advanced search

Internet use, how often * Country

Chi-Square Tests			
	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	79.185[a]	7	.000
Likelihood Ratio	86.612	7	.000
Linear-by-Linear Association	33.123	1	.000
N of Valid Cases	4479		
a. 6 cells (37.5%) have expected count less than 5. The minimum expected count is .45.			

Internet use, in minutes * Country

Chi-Square Tests			
	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	391.070[a]	121	.000
Likelihood Ratio	479.978	121	.000
Linear-by-Linear Association	93.031	1	.000
N of Valid Cases	4479		
a. 172 cells (70.5%) have expected count less than 5. The minimum expected count is .45.			

Advanced search, how familiar * Country

Chi-Square Tests			
	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	332.064[a]	7	.000
Likelihood Ratio	397.145	7	.000
Linear-by-Linear Association	236.497	1	.000
N of Valid Cases	4479		
a. 2 cells (12.5%) have expected count less than 5. The minimum expected count is 3.13.			

PDF, how familiar * Country

Chi-Square Tests			
	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	366.440[a]	7	.000
Likelihood Ratio	435.148	7	.000
Linear-by-Linear Association	282.311	1	.000
N of Valid Cases	4479		
a. 1 cells (6.3%) have expected count less than 5. The minimum expected count is 4.47.			