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THE EVOLUTION OF AUSTRIAN DIGITALISATION POLICY DISCOURSE

Master's thesis
MA Technology Governance & Digital Transformation

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ABSTRACT

This thesis contains a discourse analysis of the evolution of the coordinative policy discourse of Austrian governments since 1999. The analysis builds on Marenco & Seidl's (2020) opportunity-threat typology of national digital discourses and looks at five central digitalisation challenges: (1) digital infrastructure, (2) public administration reform, (3) assisting the economy, (4) skills & research, and (5) rights in the digital space. Methodologically, word frequency analysis and inductive coding are used to analyse Austrian government programmes (GP) as a proxy of coordinative discourse between government policymakers. The analysis finds five central elements of the Austrian government digitalisation policy discourse: (1) Austrian digitalisation discourse is opportunity-focussed, most notably on economic competitiveness, (2) 2017 marks a paradigm change in the Austrian policy discourse starting to conceptualise digitalisation as an all-pervasive phenomenon, (3) reduced bureaucracy and increased efficiency are the major discursive values across time and government composition, (4) investments in digital skills and research have only been addressed recently, posing a challenge to future digitalisation efforts, and (5) the analysis renders no evidence that the digital national coordinative discourse correlates with political parties perception of digitalisation.

Keywords: Digitalisation, discourse analysis, Austria, policy analysis, discursive institutionalism

INTRODUCTION

As the emerging varieties-of-digitalisation literature (Thelen 2018; Lloyd & Payne 2019; Marenco & Seidl 2020) shows, a country's policy response to digitalisation is „widely different" (Thelen 2018, 938), depending on how it „is talked and thought about" (Marenco & Seidl 2020, 2). These differences in the perception of digitalisation create different „political struggles [around which digitalisation] revolves" (Ibid.), such as addressing technological unemployment or remaining competitive in a globalised digital economy. Therefore, digitalisation, despite being „a seemingly common trend, [is translated] into wholly different problems in divergent national contexts" (Thelen 2018, 939). Marenco & Seidl (2020) provide a novel typology that identifies two major digital discourses for these national contexts: one that perceives digitalisation as an opportunity and one that perceives it as a threat, each of which results in different policy approaches to digitalisation depending on a countries' policymaking style.

However, the varieties-of-digitalisation literature so far primarily analyses current phenomena (Thelen 2018) but lacks comprehensive qualitative analyses of how these national discourses have evolved over the years. This thesis aims to address this research gap by analysing Austrian government programmes (GPs) since 1999. GPs are official documents containing the detailed policy agenda negotiated between Austrian government coalition parties before entering the coalition. They function as the basis for policies to be designed and implemented during the term in office, making them a useful proxy for *coordinative* policy discourse, i.e. the discourse in which policymakers engage "in the creation, elaboration, and justification of policy and programmatic ideals" (Schmidt 2008, 310). The analysis is deliberately focused on *coordinative* policy discourse to highlight the role of government policymakers as the lead conceptualizers of the national policy response while also respecting the scope of this thesis.

Specifically, the main research question of this thesis is to what degree Austrian government policy programmes perceive digitalisation as an opportunity and/or a threat and how this perception has evolved since 1999. Austria is chosen as a case due to the country's relatively long-standing digitalisation policy agenda that started out already in the 1990s, which allows for identifying

discursive changes over time. Furthermore, Austria's unique setting as „consensus democracy" (Dolezal & Hutter 2007, 1) suggests a comprehensive approach to complex policy problems such as digitalisation with likely variations in the discourse across time. The thesis also tests the hypothesis whether the evolution of this discourse is driven by the changes of government coalitions (right-wing, grand coalition, across the political aisle) in power.

The starting point of the analytical strategy for approaching this research question is using digitalisation keywords to extract the relevant digitalisation policies within the government programmes. The so obtained data set contains 625 policy references of eight government programmes which are coded according to their opportunity- or threat-perception vis-à-vis digitalisation. This data set is then discussed along the lines of five theoretically derived key policy challenges for a coherent policy response to digitalisation: (1) digital infrastructure, (2) public administration reform, (3) assisting the economy, (4) skills & research, and (5) rights in the digital space.

The thesis is structured as follows. Chapter 1 presents the theoretical framework, namely Schmidt's (2002) discursive institutionalism (1.1) and Marenco & Seidl's (2020) typology of opportunity or threat perception of national digital discourses (1.2), which is synthesised to a coherent policy response to digitalisations' five central policy challenges (1.3). Chapter 2 provides background information on the case of Austria, the country's political system (2.1), brief political history (2.2) and overview of digitalisation efforts (2.3) to provide context for the following discourse analysis and make the argument that Austria's represents a collaborative policymaking style in Marenco & Seidl's (2020) typology. Chapter 3 presents the methodology and analysis applied to the discourse analysis, its time frame (3.1), data set selection (3.2) and analytical strategy for the coding (3.3) while also discussing the thesis limitations (3.4). Chapter 4 presents the overall results of the discourse analysis (4.1), the word frequency analysis (4.2) and reference coding (4.3). Chapter 5 discusses the findings of the evolution of Austria's digitalisation policy discourse along the lines of the five central policy challenges introduced in section (1.3). The final section briefly concludes.

1. THEORETICAL FRAMEWORK

The theoretical framework is structured as follows. The first section introduces discursive institutionalism and, more concretely, its coordinative discourse function as the main theoretical concept. The second section presents the two main digital discourses (opportunity and threat), their main policy proposals, and their respective approaches to digitalisation and its social and economic effects. Finally, the essence of both discourses is combined to a coherent policy response to digitalisation in the form of five policy challenges. This coherent mix of policies provides the reference point of the discourse analysis in the following chapters.

1.1. Discursive institutionalism

Discourse theory is well equipped to analyse public policy as it "is made of language" (Majone 1989, 1) and language is shaped by discourse. Discourse, in this view, is where policy actors articulate their view on what explains the ongoing digital transformation and its respective challenges (Wueest 2013). At the same time, specific local discourses govern how global developments are thought about locally, and in turn, addressed distinctly through different policies (Hay and Rosamond 2002). Vivien Schmidt's (2002; 2006; 2008) discursive institutionalism provides a framework that explains how these policies are constructed and communicated to the broader public. Schmidt defines policy discourse as "whatever policy actors say to one another and the public in their efforts to generate and legitimise a policy programme" (Schmidt 2002, 210).

Discourse, according to Schmidt, is not only the ideas and values underlying the policies (ideational dimension) but also the interaction behind the construction and communication of said policies (interactive dimension). Both the ideational and the interactive dimensions have two distinct functions each. The ideational dimension has a cognitive and a normative function (Schmidt 2002, 213, 230). The cognitive function represents the conceptual building material for the internal consistency of a policy (Schmidt 2002). This consistency is what differentiates a specific policy from its competitors. The normative function legitimises the embracement of that policy to persuade others of a change from the current state of things (Schmidt 2002). The

interactive dimension of Schmidt's discourse has a coordinative and communicative function (Schmidt 2002, 230). The coordinative function gives those in the policy sphere a 'common language' to build policy. The policy sphere consists of individuals and groups involved "in the creation, elaboration, and justification of policy and programmatic ideals" (Schmidt 2008, 310). The communicative function aims to communicate the reasonableness of policies, i.e. their necessity and legitimacy, to the public. In other words, communicative discourse aims to convince the public of the merits of a policy.

1.2. Digitalisation: An opportunity or a threat?

Marenco & Seidl (2020) developed a discursive-institutionalist typology of national digitalisation discourses. They define four types of digitalisation discourses depending on perception (opportunity vs threat) and policymaking style (collaborative vs conflictual). Nations with a collaborative policymaking style that view digitalisation as an opportunity harbour a proactive discourse in which digitalisation is embraced, and the emphasis lies on investments that help workers and companies survive and thrive in a digital economy. Nations whose policymaking style is collaborative, but view digitalisation as a threat, focus on passively compensating individuals and businesses that stand to lose from digitalisation in what is labelled a compensatory discourse. A conflictual policymaking style in an environment that views digitalisation as an opportunity results in a unilateral discourse in the sense of different actors emphasising their own and often conflicting interpretations of how they can benefit society. If the policymaking style is conflictual and digitalisation is viewed as a threat, a Luddite discourse emerges in which actors try to stop or reverse digitalisation (Marenco & Seidl 2020).

1.2.1. The opportunity discourse

The opportunity discourse of digitalisation emphasises the seemingly endless economic and social opportunities digital technologies provide (Kvasny & Truex 2001). Policy proposals grounded in this discourse aim to establish a regulatory environment that enables the diffusion of digital technologies within both the public and private sectors (e.g. Meltzer 2016). Such reform aims to help the economy as a whole to adapt to the changing circumstances and also includes investing in key areas to assist in the effort to digitalise production and organisational processes (Levy 2003). The public sector is seen as the agent of assisting this change and the subject of transformative adaption itself. Through e-government services and broader public sector innovation, public

services can increase efficiency, efficacy, and citizen satisfaction (Mergel et al. 2019). Potential social inequality such as labour market displacement and the digital divide is manageable by smart regulation and prescient public investment (Stevens & Marchant 2017).

The opportunity discourse is grounded in the belief that technology is an inherent force for good with overwhelming benefits for society. Digitalisation, in this view, is the latest frontier of technological advancement that brings about economic and social progress (Basiago 1994). The suggested policy response focuses on enabling business and investing in people's skills to adapt to the new digital paradigm (Negroponte 1995). In this discourse, attempts to exacerbate implementation or complicate regulation in the name of other interests tend to be met with reservations or outright rejected.

1.2.2. The threat discourse

The threat discourse disputes the inherent beneficial nature of digitalisation for society. Digital technology, in this view, is not seen as an autonomous force but considered a potential threat to civil liberties and social cohesion that require political intervention (Britz 1996). Such threats include worker displacement, technological unemployment, and the resulting unequal distribution of political and economic power (De Groen et al. 2017). Another threat is the increase of labour market polarisation resulting in distributive inequality of the benefits of digitalisation (Lovergine & Perello 2018). Digitalisation may also threaten the erosion of the tax base while increasing income and wealth inequality (Schratzenstaller 2018). There also exists the threat of a digital divide along geographical and generational lines as access to digital services do not reach everyone equally (Van Dijk 2020).

Furthermore, the ongoing digitalisation of media, communication, and society threaten data protection, equality, fairness, security, and privacy (Svensson & Äström 2016). As a result, the threat discourse demands a policy response that accompanies the diffusion of technology with powerful regulation that prevents distributive and social ramifications of digital disruption. The threat discourse is grounded in the belief that society can alter the direction of innovation and shape the circumstances of people's lives (Wajcman 2002). Table 1 summarises the main features of the two digital discourses.

Table 1: Two main digital discourses

#	Discourse	Description	Main aim	Highest value	Main sentiment
1	Economic **Opportunity**	D has the potential to increase economic output and tackle social problems	to enable economic and social potential	better service, higher efficiency (quality)	optimistic, necessary
2	Social **Threat**	D poses a challenge with the potential to threaten social and distributive values	to mitigate and prevent adverse effects	civil rights and distributive justice (equality)	cautious, critical

Source: Own representation, based on Marenco & Seidl (2020)

1.3. A coherent policy response addressing digitalisation

A coherent policy response to digitalisation takes both the opportunity and threats discourse seriously as credible accounts of the potential impacts of digitalisation. Such a policy response manages to foster the economic and social opportunities posed by digitalisation while also addressing the concerns of related social threats in terms of distributive justice and civil liberties. The following sections provide a more detailed view of the concrete policy challenges posed by digitalisation and respective policy response according to each discourse.

1.3.1. Five central digital policy challenges

The pervasiveness of digitalisation requires a coherent policy strategy that goes beyond implementing individual policy measures. Such a strategy must embrace science and technology policy to support the direction of innovation (Karo & Kattel 2018). More concretely, this strategy requires addressing five key policy challenges to make digitalisation economically and beneficial: (1) digital infrastructure, (2) reforming public administration, (3) helping the economy to adapt through regulatory reform and investment, (4) investing in digital skills & research, and (5) safeguarding the digital space & rights.

First, the basis for any successful digitalisation effort is the full-scale deployment of digital infrastructure, i.e. a powerful and resilient broadband internet infrastructure throughout the country of the highest capacity and data rates possible (glass fibre, 5G) (Soldani & Manzalini 2013). The challenge to deploying such infrastructure is to prevent a digital divide by ensuring the two public administration dimensions of equal access (equity) and consistent service quality (performance) (Bouckaert 2011, in Drechsler 2013, 320).

Second, digitalisation requires the public sector to reform its public administration structure and processes (Scheer et al. 2013). Reforming these structures and processes with regards to interoperability between public service providers, reforming the legal framework and operational processes within authorities in order to obtain capacities to design and implement new digital (or electronic) services. Such services are characterised as one-stop services that reduce the necessary interaction between citizen and state to a once-only point of contact (Feng 2007). To achieve such a structure, the public sector needs to be able to (technically and legally) share existing (personal) information between individual public service providers (social security, insurances, authorities, police, etc.), and processes that allow working together across ministries on the public administration level (Otjacques 2007). Put concretely, the public administration needs an advanced public digital infrastructure, data sharing systems between authorities, e-identity systems, digital signature infrastructures and public management capabilities (Wirtz & Daiser 2018). If these are achieved, digital services yield the promised increased efficiency, less bureaucracy, quality and speed of public services digitisation promises (Mergel et al. 2019). If one element in the system is missing, efficiency and quality reductions are likely to occur. For instance, if acceptance differs between social groups (young/old), an analogue system might have to be run in parallel for some time, decreasing projected gains in efficiency and cost savings. Furthermore, the public sector is faced with keeping its promise to the people, regardless of locational and social status. Thus, it needs to make its digital services also available to everyone addressing threats such as the digital divide along generational, locational and social lines (Van Dijk 2020).

Third, the economy requires assistance in terms of helpful regulatory reform and generating investment. (Trute 2018). Such areas of regulation include open data legislation, copyright and media law, tax regulation, and labour and company laws. The primary policy challenge is to adapt this regulation in a way that both enables the diffusion of digital technologies and maintain workers right's in a socially inclusive way. In data protection law, this means reconciling the fundamental right of personal data protection with the need for data availability for research and service purposes (Lux et al. 2017). In tax regulation, this means adapting the tax code in a way that captures the added value of data-based services across borders (Schratzenstaller 2018). Digital platform companies raise new challenges for competition law as those platforms exercise significant market power over portions of the newly emerging digital infrastructure (Hylton 2019). Labour laws need to be adapted to address the need for more flexibility in the digitalising economy while ensuring workers' rights in an inclusive way (Freyler 2019).

Fourth, the transformation of the economy generates a demand for new skills and research in order to combat the threat of reduced wealth in a competitive world and face technological unemployment. Specifically, the working population requires two sets of skills: First, hard skills such as programming, data analysis, machine learning tools and artificial intelligence as the central qualifications of the labour force that develops frontier digital products and services (Taylor-Smith et al. 2019). Second, soft skills denote the knowledge of how to use digital devices like computers, smartphones, and other devices, as well as digital services such as software in their work processes (Gekara et al. 2019). This skill demand requires curriculum revisions and investments in professional training.

Finally, a coherent digitalisation policy requires innovative regulatory reform of the emerging 'digital space' where data is the new oil (Hirsch 2013) and thus the main resource for profit and innovation as well as discrimination and harmful social ramifications. More concretely, the policy challenge is to preserve fundamental rights such as privacy, equality, fairness, security by, for instance, protecting from algorithmic discrimination and misuses of personal data as well as preventing discrimination and hate speech (Doby et al. 2019). Besides regulatory measures to ensure the protection of those rights, the policy response may also include investments in digital competencies that allow people to navigate digital devices and online spaces in a self-determined and safe fashion (Krumsvik 2014; Van Dijk 2013). Such competencies help people surf safely on the internet, protect their personal data, identify fake news, or better respond to cyber mobbing.

1.3.2. Summary

These five policy challenges display the opportunities digitalisation presents to societies while also indicating potential threats to social values and cohesion. The policy response to those challenges may differ depending on a dominant discourse shaping those policies. For instance, a dominant threat discourse would approach the data regulation question from the perspective that personal data should be protected at all costs, while an opportunity discourse would push for making data collection and accessibility central to the state's digitalisation strategy. Table 2 summarises the presented discourse positions for each of the five policy challenges. This categorisation functions as the basis for the coding strategy in the analysis.

Table 2: Summary of main digitalisation policy challenges

Digitalisation Challenge	Individual policy challenge	Opportunity discourse	Threat discourse
digital infrastructure	internet infrastructure deployment	to create the basis for digitalisation	inequality of access and service quality, digital divide
	infrastructure regulation reform	to help finance and implement infrastructure	
public administration reform	interoperability between public service providers	once-only, more efficient and user-friendly public services	misuse of data, too powerful state
	legal and operative side of PA reform	cost-savings for the public sector, less bureaucracy, better service quality	state employees face unemployment risk
	acceptance and trust	high efficiency and success rate	lower efficiency gains, mistrust in institutions
	development of new public services	new novel services, open data, higher transparency	digital divide
economy: regulation & investment	media and copyright laws	better media services	global competition pressure, threat to public value & originators' income
	tax and financial regulation	allows the attraction of investment/business	erosion of the tax base, tax evasion
	data regulation	open and accessible for innovative digital services	transparent citizen, data protection, losing (digital) sovereignty
	labour and company laws	work (-ingtime) flexibility, less bureaucracy for companies	lowering of workers' rights
	investing in the private sector	necessary to participate successfully in the tech race	too much focus on companies rather than workers
skills & research	hard digital skills	specialist labour supply	labour polarisation, unequal wage distribution
	soft digital skills	helps people utilise digital processes in their work	technological unemployment, digital divide
	update university curricula & research funding	kickstart innovation and investment	neglecting valuable non-digital research
digital space & rights	Privacy	use of personal data for personalised services	invasion of privacy, unprotected data, surveillance
	equality & fairness	more social interaction, connection	discrimination, hate speech, unequal treatment, fraud
	Security	Safer society	cyber threats, surveillance
	digital competencies	enabling people to use digital tech safely	cyber mobbing, fake news, data misuse

Source: Own table, based on literature in the previous section.

2. THE CASE OF AUSTRIA

This section provides some descriptive background information on the case of Austria, namely the intricacies of the country's political system (2.1) and the changing political majorities and government coalitions in power (2.2), an overview of the country's digitalisation performance (2.3), before specifying how the presented arguments inform the operationalisation of the research question (2.4).

2.1. Austria's political system

Austria is a consolidated democracy in Central Europe (Wuttke et al. 2020). After returning to parliamentary democracy after World War Two, Austria developed what is called a "concordance democracy" (Pelinka 2004), where political power is separated between the two main political forces – the Christian Conservatives (ÖVP) and the Social Democrats (SPÖ). Two features characterise this political system: The federal constitution and the corporatist tradition (see Helms & Wineroither 2017).

The federal structure gives regions an important constitutional role as the indirect federal administration implementing laws for the government and adopting legislation on their own in areas that are not regulated centrally (Bußjäger 2017). As a result, many political decisions, including public sector reforms, require regional consent and involvement. A recent example of this is the decisive influence of the informal group of governors on government health measures during the Covid-19 pandemic. The decision whether to enact and end lockdowns depended on governors' ability to find a common position, not the federal government itself.

The corporatist tradition is exemplified in the Sozialpartnerschaft, which is an informal institution consisting of representative bodies for businesses, workers and farmers who negotiate the distribution of productivity increase, workers' rights and company obligations themselves without direct government involvement (Talos 2017). As a result, Austria has not seen relevant labour conflicts but, in turn, a rich and robust labour rights' legislation. Despite attempts of recent

governments to undermine the Sozialpartnerschaft, the stakeholders it represents have remained relatively strong until today (Hinterseer 2017).

These two features, among other less significant ones, let Hels & Wineroither (2017, 23) label Austria's political system a "consensus democracy" (Dolezal & Hutter 2007), which precludes polarising decisions of small majorities. This consensus focus and strong checks on particular interests make Austria, in Marenco & Seidl's (2020) typology terms, a country with an institutionally enforced collaborative policymaking style.

2.2. A brief history of Austrian governments

After World War Two, Austria has not seen much political volatility until the era of one-party absolute majority governments (ÖVP: 1966-1970; SPÖ: 1970-1983). Significantly the long-lasting Social Democrat majority shaped the country's current social structure implementing many progressive reforms regarding social and welfare policy – in lockstep with many Western European countries at the time. The next shift in political power did not happen until the mid-1980s with the founding of the Green Party and the overtaking of the Freedom Party (FPÖ) by far-right leader Jörg Haider. The 1990s saw the accession to the European Union in 1995 under SPÖ Chancellor Franz Vranitzky accompanied by the continued rise of the FPÖ culminating in the collapse of the cordon sanitaire strategy when the ÖVP under Wolfgang Schüssel formed a coalition with the FPÖ after the 1999 election. This breach of taboo marked the tentative "end of the concordance democracy" (Pelinka 2001). The cooperation between the two main political forces was over, and key players of the former system, such as the Sozialpartnerschaft, were put into question. The first Schüssel cabinet ended in the capturing of much of the FPÖ vote by the ÖVP in the 2002 snap election after the former blew up the government following serious internal disputes. After the ÖVP defeat in 2006, Austria saw the 'Grand Coalitions' renaissance under Social Democratic Leadership and the ÖVP as their governing partner. This era ended in 2017 when the ÖVP under their new leader Sebastian Kurz reapproached the far-right agenda and formed a right-wing government with the FPÖ. A corruption scandal in 2019 saw fresh elections culminating in another novel political coalition between the election winners ÖVP and Grüne.

2.3. Overview of Austrian digitalisation efforts

Austria's engagement with digitalisation policy was kickstarted in the 1990s with the establishment of two central basic infrastructure institutions that build the basis for digital interoperability and are the corner stone Austrian digitalisation efforts still today: the Central Population Register (ZMR) and the Federal Computing Centre (BRZ) (Wimmer 2019).

The ZMR stores identity data, including name, gender, date of birth, civil status, citizenship and residence. This registry, established in the 1990s and taken effect in 2002, requires every person with main or secondary residence in Austria to register in this database (Stember et al. 2020). Responsible local registry offices can access the registry as well as certified banks, insurances, notaries, and attorneys have direct access when required for their services and legal obligations (Österreichischer Gemeindebund 2001).

The BRZ centrally hosts the mainframe computers of most major ministries. This joint merging of technical infrastructure allowed an early development of electronic services (Wimmer 2012). The first big milestone of this development was HELP, one of Europe's first one-stop government online portals for citizens (Winter 1998). This platform consolidates relevant information for citizens according to their life circumstances, transcending ministry responsibilities. These early investments paid off in high scorings of the Cap Gemini studies by the European Commission in the early and mid-2000s, letting Austria co-lead European digitalisation efforts for some time (Fahrnberger 2008).

Austria also established specific legal and strategic institutions to help implement digitalisation efforts in the public sector. In 2004, Austria adopted an E-Government Law, which regulates e-government services (Centner 2006, 8). The platform 'Digital Austria' – a combination of the previous strategic bodies, the ICT-Board and E-Cooperation Board – coordinates the implementation of digitalisation services across local, regional and federal levels (Wimmer 2019). Since then, Austria has introduced many more digital public services; for an overview of all milestones since 1997, see Table 3.

Table 3: List of digital services and regulation milestones 1997-2020

Year	Abb.	Original Name Translation	Description

1997	HELP	HELP-Bürgerportal HELP-Citizen portal	central online official information portal for citizens on public services and legal rights and obligations
1997		Online-Banking	banks start offering online banking services
1997	RIS	Rechtsinformationsystem Legal Information System	A central website documenting all new and changed laws for public access
1997	BRZ	Bundesrechenzentrum Federal Computing Centre	central server institution hosting mainframe computer systems of most ministries
2000		Datenschutzgesetz Data Protection Law	first data protection law enacted
2002	ZMR	Zentrales Melderegister Central Population Register	mandatory registry that stores main identity data (name, gender, residence, citizenship)
2003		FinanzOnline FinanceOnline	central digital electronic tax filing service goes online widespread
2004	EEG	E-Government-Gesetz E-Government-Law	a law regulating all e-government services as the main legal basis for all digitalisation laws
2004		Bürger*innenkarte Citizen Card	electronic identity card to conduct e-government services
2005		e-card	electronic card for conducting health services within the public health care system
2009		Handysignatur Mobile Phone Signature	electronic signature to sign official documents and applications
2010	USP	Unternehmensserviceportal Businesses Service Portal	central portal for digital public services for the private sector
2012		data.gv.at	open data platform of open non-personal administration data and the public sectors
2013	ELGA	Electronic Health Record Elektronische Gesundheitsakte	electronic healthcare database digitalising the processing of all health care services
2014		opendataportal.at	open data platform of non-personal data from businesses, NGOs, research and civil society
2015	GISA	Gewerbeinformationssystem Business Information System	a central portal that houses all relevant information for businesses to conduct official acts
2015		Antraglose Familienbeihilfe Automated Family Allowance	automated granting of monthly family allowance to parents upon the birth of their child
2017		Antragloser Steuerausgleich Automated Tax Credit	automated tax credit assessment of employees
2019		Elektronischer Impfpass Electronic Vaccination Pass	digital database for newly conducted vaccinations of residence in Austria
2019		App Digitales Amt App Digital Office	mobile application that combines many e-government services in one place
2020		elektronische Zustellung electronic delivery	right to electronic delivery legally established

Sources: Wimmer (2019); Fahrnberger (2008); Schürtz (2015); Gisser (2020); Digital Roadmap (2016); EC (2016, 2017, 2020), own tabulation.

Today, Austria faces a somewhat ambivalent record of the state of digitalisation compared to other countries. As Figure 1 below shows, the leading digitalisation indices place Austria within the EU average when it comes to digitalisation of both the economy and society as a whole (10th in EU DESI) but much better regarding the state of e-government (3rd in E-Gov Benchmark). Also, in worldwide comparison, Austria's e-government record remains within the Top 15.

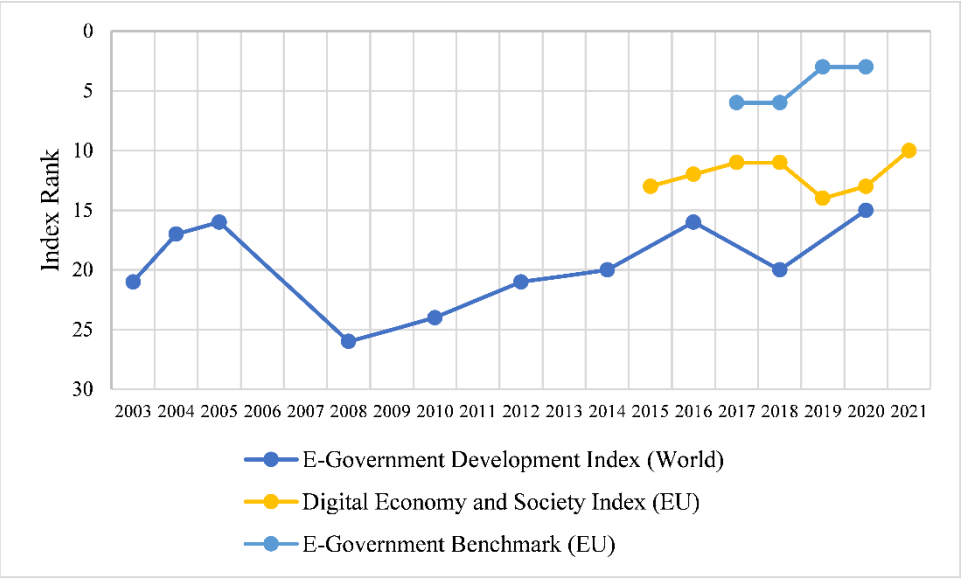

Figure 1: Austria's ranking in leading digitalisation indices. 2003-2021.
Sources: UN DESA; European Commission. Note: No average index data available for E-Government Benchmark before 2016.

Austria's third place in the E-Government Benchmark rating rests upon the growing number of well-working public sectors listed by the European Commission lists as "good practices" (EC 2017). Those are, among others, the mobile application *Digitales Amt*; the right to electronic communication; the citizen information portals *help.gv.at* and *oesterreich.gv.at*; the finance ministry's services application-free tax credit assessment of employees and automated family allowances; the open data platforms *data.gv.at* and *opendataportal.at*; the mobile phone signature and the business service portal USP (EC 2016; EC 2017; EC 2020).

All in all, the evolution of Austrian digitalisation efforts may be described as average regarding the overall digitalisation of the economy and society but after recent improvements faring well when it comes to e-government public digital services.

2.4. Operationalising the research question

As shown in the previous sections, Austria represents a case that has seen early success in digitalising the public sector, followed by a period of relative stagnation compared to similar countries – while catching up recently. This development begs the question, what changed over time, precisely what made policymakers change their policy focus. The varieties-of-digitalisation literature suggests that national discourses inform the policy response, how digitalisation is

thought about and managed. A change in the national discourse hence results in changes in policies. Mapping this national discourse and its evolution over time allows inferring potential explanations for performance changes. Either the mapping does not reveal variations in the policy discourse but rather a common national discourse independent of government coalitions in power. Or variations in the discourse occur, suggesting that major political parties harbour different perceptions vis-à-vis digitalisation and its effects. The next chapter explains the analytical strategy to go about this in more detail.

3. METHODOLOGY

To operationalise the main research question, i.e. comparably analysing the evolution of the national digitalisation discourse, three steps based on Yin (2018) are required: (1) choosing a precise time frame, (2) selecting a coherent data set representing the Austrian coordinative discourse, and (3) setting up an analytical strategy to discuss the respective discourses based on the theoretical framework.

3.1. Time frame

The time frame is chosen based on two desiderata: relevance of digitalisation in the policy discourse and availability of a comparable and coherent data set over time. The overview of Austria's digitalisation efforts in section 2.3 suggests choosing a time frame for this analysis from 1997 to 2020. This period would cover eight election cycles with four grand coalitions (GC), three right-wing (RW) coalitions and one coalition between parties across the political aisle (APA) (see Table 4).

Table 4: List of Austrian federal governments since 1995

Legal governmental period	**Election year**	**Chancellor**	**Coalition Parties / Senior + Junior partner (party abbreviations)**	**Classification**
XX.	1995	Vranitzky VI (1997-) Klima	Social Democrats (SPÖ) + Conservatives (ÖVP)	Grand Coalition (GC)
XXI.	1999	Schüssel I	Conservatives (ÖVP) + Nationalists (FPÖ)	Right-Wing (RW)
XXII.	2002	Schüssel II	Conservatives (ÖVP) + Nationalists (FPÖ/BZÖ)	Right-Wing (RW)
XXIII.	2006	Gusenbauer I	Social Democrats (SPÖ) + Conservatives (ÖVP)	Grand Coalition (GC)
XXIV.	2008	Faymann I	Social Democrats (SPÖ) + Conservatives (ÖVP)	Grand Coalition (GC)
XXV.	2013	Faymann II / (2016-) Kern I	Social Democrats (SPÖ) + Conservatives (ÖVP)	Grand Coalition (GC)
XXVI.	2017	Kurz I	Conservatives (ÖVP) + Nationalists (FPÖ)	Right-Wing (RW)
XXVII.	2019	Kurz II	Conservatives (ÖVP) + Greens (Grüne)	Across Political Aisle (APA)

Source: Own table

Note that two of those eight election cycles had seen changes in the office of chancellor during the governing period without previous elections in 1997 and 2016 when SPÖ Chancellors Franz Vranitzky and Werner Faymann resigned and were replaced by Viktor Klima and Christian Kern, respectively.

3.2. Data set

This thesis uses official Austrian government programmes as the main data set for analysis. These government programmes (GPs) represent a useful proxy for the official government policy discourse for the following reasons. GPs play a crucial role in the formation of Austrian government policy as they represent detailed agreements on specific policy measures of the legislative agenda a specific government aims to implement during their term of office (Rudzio 2005). These programmes are also known as 'coalition treaties', as their contents are the basis upon which the mutual support of the government coalition member parties of each other rest (Müller 1994). The contents of these treaties are politically binding; unilateral deviations from the programme give the 'betrayed' party a de facto reason to end the government and schedule early elections (Rudzio 2005). Thus, one can consider government programmes the outcome of the coordinative discourse among Austria's government policymakers. A key advantage of GPs as a date set is their comparability in the sense that they keep their function and influence on government policy independent of the different government compositions in power. Furthermore, this specific document category allows for a coherent analysis while not exceeding the scope of the thesis.

Note that after Christian Kern (SPÖ) became chancellor in 2016, one of his priorities was to renegotiate the GP (2013) in effect at that time. The change in chancellorship was widely considered a move of trying to revive the programmatic agenda, while the rest of the government and coalition remained the same (Plescia et al. 2017). The Kern GP, however, cannot be considered a full-fledged GP as it only sets out additional priorities of the relatively outdated GP of the Faymann II government for the remaining official two years of the XXV. governmental period, as shown by the short length (35 pages) (see Table 5). Therefore, for the general analysis across governmental periods, the Kern GP is merged with the primary GP (Faymann II) of the XXV. governmental period. The more detailed discourse analysis of the five individual policy challenges,

however, differentiates between the Faymann II GP and the Kern GP in order to highlight some important changes in the digital policy agenda.

Table 5: Page scope of government programmes (GPs)

Governmental period	Election year	Head of Government	GP pages
XX.	1995	Vranitzky VI	59
		Klima (1997)[1]	*n.a.*
XXI.	1999	Schüssel I	108
XXII.	2002	Schüssel II	40
XXIII.	2006	Gusenbauer	167
XXIV.	2008	Faymann I	287
XXV.	2013	Faymann II	124
		Kern (2016)[2]	35
XXVI.	2017	Kurz I	179
XXVII.	2019	Kurz II	326

Source: Own table

3.3. Analytical strategy

The analytical strategy for the discourse analysis contains six steps. The coding is done using the NVivo software.

1) *Obtaining the data set*: The most recent GP are accessible to the public on the internet; for the older ones, digital scans from the Austrian national library need to be obtained.

2) *Keyword selection*: In order to isolate the relevant digital policy measures in the data set, the following keywords based on the theoretical discussion about the coherent policy response to digitalisation (see section 1.3) are selected: digital, digitalisation, data, e-government, electronic, one-stop, internet. Word stem matches are included.

3) *Structuring of data set*: The so obtained data set is then structured in two ways. First, multiple keywords within the same policy description are combined to one data reference each. Second, each collected reference is coded to their respective policy area it covers. This policy area coding is held consistent with the given thematic structure of the GPs.

[1] Note, unlike Kern, Klima did not renegotiate the Vranitzky VI GP after taking office in 1997.

[2] The Kern GP was officially published in January 2017, in order to not confuse with the following Kurz I (2017) GP, the Kern GP will be throughout the thesis denoted according to the year Kern took his office (2016).

4) *Conducting word frequency analysis*: A word frequency query representative of the two digital discourses (opportunity vs threat) is conducted to identify a starting point for the inductive coding of categories in step 5.

5) *Inductive coding*: Inductive coding based on the theoretically derived policy challenges (see Table 2) is undertaken. References not able to be assigned are coded as residual.

The so obtained coded data shows the evolution of Austrian digital policy discourse, i.e. how opportunity and threat-focused it has been over the years along the lines of the five main digital policy challenges outlined in the theoretical framework (see summary in section 1.3.2): (1) infrastructure, (2) public administration reform, (3) assisting the economy, (4) skills & research, and (5) rights in the digital space.

3.4. Limitations

This methodological approach involves four main limitations. First, the inductive coding approach results in a high number of codes. This limitation is addressed by limiting the discussion to major changes in the discourse over time rather than discussing all individual references themselves.

Second, the chosen data set does not allow to test whether policies were ultimately implemented as government programmes only cover the government's policy intentions – albeit politically binding ones making it highly likely that no policy contradicting those intentions were implemented. In fact, as all analysed governments except XXI. and XXIV collapsed before the end of their term, they were naturally not able to implement their full agenda. However, even though not all policies set out in the GPs were implemented, GPs represent how digitalisation issues have been thought about and approached, which is the main research question of this thesis.

Third, the qualitative research methods invoke limitations regarding general validity, as the inductive nature of coding faces problems of potential bias. This is addressed by choosing a coherent primary data set that already sets out a specific content structure, that is, the given thematic structure of GPs, to have more objective coding.

Fourth, the preliminary analysis showed that the Vranitzky IV GP has no references to digitalisation policies at all. Additional research indicates the inexistence of an official government

policy strategy addressing digitalisation as early as 1995. As a result, the analysis drops the Vranitzky GP and only covers the eight GPs since 1999 (see Table 5), slightly reducing external validity.

4. ANALYSIS

4.1. Obtaining and structuring the data set

The structured data set consists of 625 references, each representing a policy related to digitalisation. The distribution of those references shows the steady increase of digitalisation policies in Austrian government agendas over time (see Figure 2).

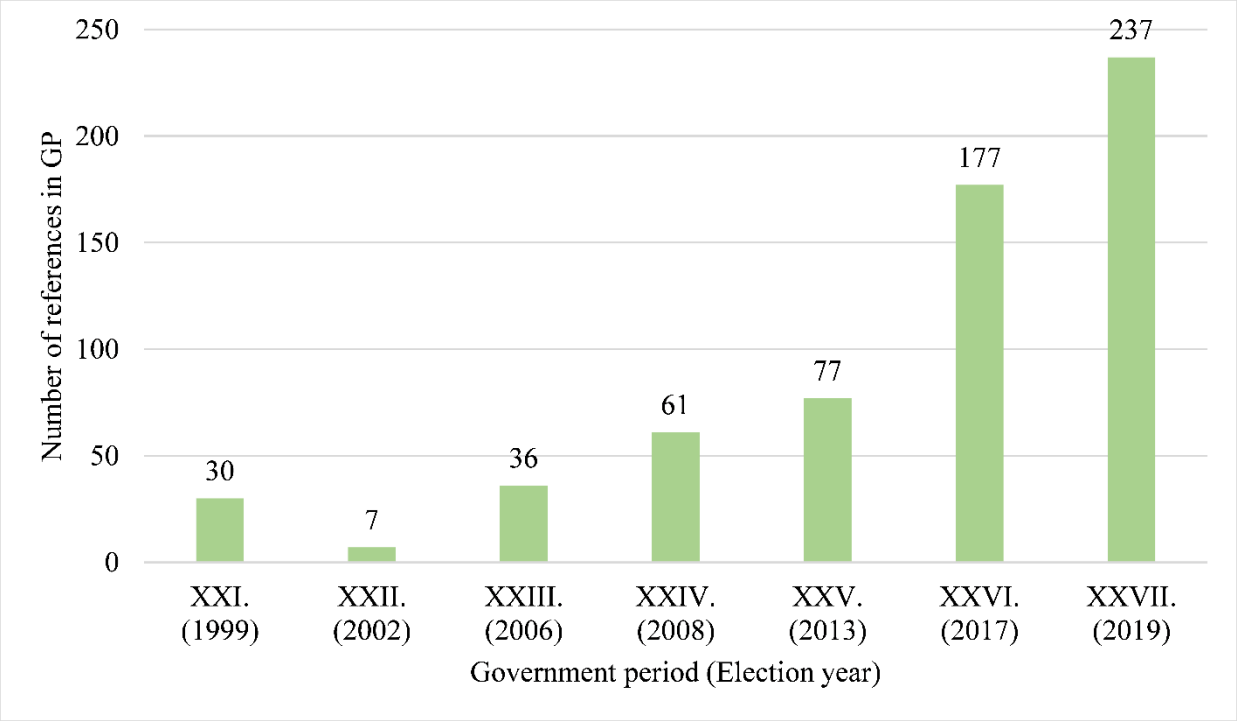

Figure 2: Number of references of digitalisation policies[3]

This overview shows, Austrian digitalisation policy, has for the most part, not been considered as an all-pervasive policy challenge that affects all of society beyond the sectors that deal directly with the impact of digital technology, such as online businesses or media. Especially the 2002 GP of the Schüssel II government stands out as lacking a comprehensive digitalisation policy agenda altogether. This is likely due to the fact that the 2002 GP was negotiated between the same RW

[3] Note: As outlined in the analytical strategy, XXV. (2013) as is calculated as the sum of the Faymann II (2013) and Kern (2016) GPs.

coalition partners of the previous 1999 GP and not setting many new policy proposals but agreeing on the continuation of the government's course, as indicated by its short length (35 pages). During the GC renaissance (2006-2017), the digital policy agenda was heavily focused on the central elements of digitalisation, i.e. the deployment of infrastructure and the development of e-government services. The turning point to go beyond this core understanding of the digitalisation challenge started with the Kern GP focus on investing in digital education and research, following the assessment that there was a lot of "need to catch up" (2016, 17). But only with the 2017 GP one can see a truly pervasive approach to digitalisation with digital policies in health, sports, family, tourism and housing, all policy fields that are not primarily concerned with digital matters that is continuing in the 2019 GP.

4.2. Discourse word frequency analysis

The word frequency analysis is based on four major word clusters based on the theoretical framework (cf. Table 2):

1) *opportunity+future+innovation* consists of keywords that speak of the chance, potential, opportunity, innovation and progress digitalisation promises.

2) *competition+transformation+efficiency* consists of keywords that speak of the competition and efficiency pressures digitalisation puts on individual countries.

3) *challenges+dangers* consists of keywords that speak of the challenges and dangers digitalisation poses to societies.

4) *citizens+rights+inclusion* consists of keywords that speak of the citizen-orientation digitalisation may entail and the need of protecting civil rights inclusively.

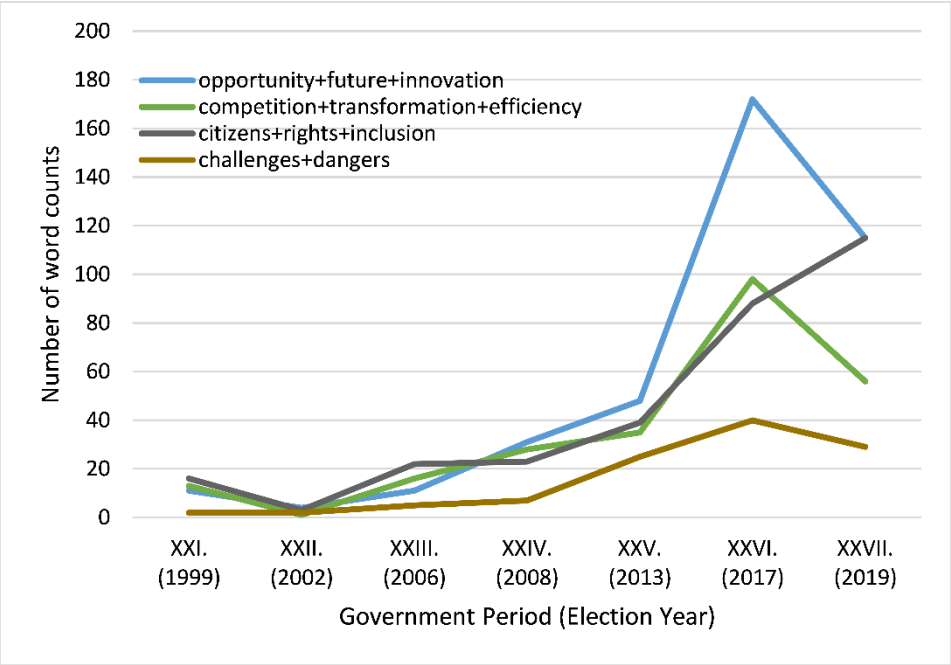

Figure 3: Word frequency query result

The keyword analysis shows a steady distribution of all four keyword clusters until 2017. Already in 2013, there is a minor pivot towards embracing the opportunities and innovation digitalisation may entail, but only the 2017 GP fully embraces this discourse setting out a detailed all-pervasive digitalisation focus across policy fields. Note that the 2019 GP shows an increase of the rights-inclusion cluster at the expense of both the innovation and competition clusters, which is likely due to the government participation of the Green party shifting the coordinative discourse slightly into this direction.

4.3. Coding of references

The obtained data set is then coded according to the positions of the opportunity and threat discourses regarding the five main policy challenges laid out in the theoretical framework: (1) digital infrastructure, (2) reforming public administration, (3) helping the economy through regulatory reform and investment (4) investing in digital skills & research, and (5) safeguarding the digital space & rights (see Table 2). The result of this coding is pictured in Table 6. One can see the overall dominance of Austrian digitalisation policy with regards to reforming the public administration (#2) and helping the economy (#3).

Table 6: Result of coding of references according to the main five policy challenges

#	**Policy Challenge**	1999	2002	2006	2008	2013	2016	2017	2019	***Total***
1	infrastructure	1	0	2	1	2	9	15	9	*39*
		0	0	0	0	1	2	0	0	*3*
2	pa reform	11	3	14	34	15	4	38	68	*187*
		1	1	2	1	3	0	12	7	*27*
3	econ_reg & inv	12	2	6	9	9	2	30	64	*134*
		0	1	5	6	10	0	14	23	*59*
4	skills_research	0	0	0	0	1	3	20	7	*31*
		0	0	0	0	0	0	3	8	*11*
5	digital_space	2	0	5	2	0	4	18	18	*49*
		3	0	2	8	9	3	28	32	*85*
TOTAL Opportunity		**26**	**5**	**27**	**46**	**27**	**22**	**121**	**166**	***440***
TOTAL Threat		**4**	**2**	**9**	**15**	**23**	**5**	**57**	**70**	***185***
TOTAL		30	7	36	61	50	27	178	236	625

5. FINDINGS & DISCUSSION

5.1. Overview

The overall distribution of the 625 references included in the analysis indicates the primary perception of digitalisation in Austria's national coordinative discourse to be opportunity-focussed (see Figure 4). However, three outliers can be identified: The 2013 GP has only a slim majority (56%) of opportunity references, while both Schüssel I (1999) and Kern (2016) have an even stronger opportunity focus (>80%) than the average (73%).

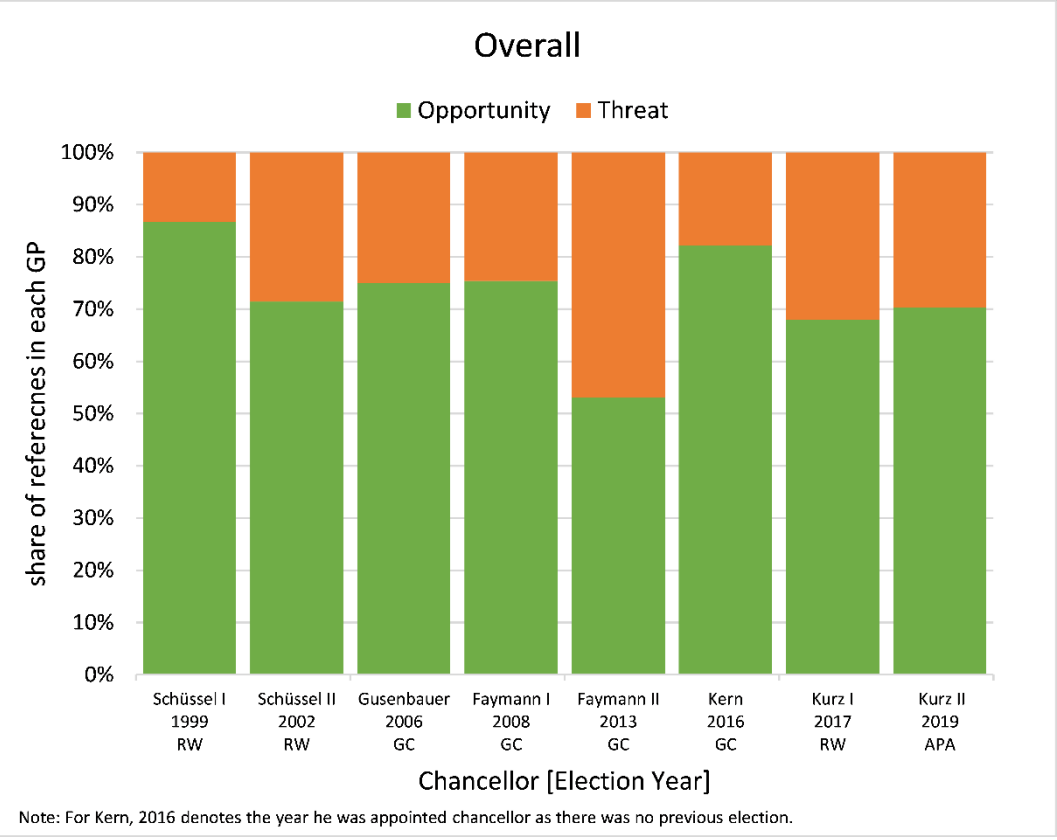

Figure 4: Coding distribution of all 625 references

The novelty of digitalisation as a policy issue and optimistic general perception of the Internet revolution at the time may explain the strong opportunity-focus of the 1999 GP; knowledge and public interest about the potential repercussions were less prominent.

The change from 2013-2016 likely results from the reprioritisation within the leading Social Democrats (SPÖ) to modernise their profile, focusing on digitalisation and innovation (Berk et al. 2021). As the former head of the Austrian railway and with significant management background, incoming Chancellor Christian Kern brought a positive approach to digitalisation and its potential to improve public services (Oxford Analytica 2017).

Furthermore, both RW (1999/2002/2017) and GC (2006/2008/2013/2016) governments vary in their share of opportunity-focused references, suggesting no explanatory potential of changing government coalitions to be the driver in changes in the national discourse as the overall reference discourse perception distribution does not significantly correlate with changing government coalitions (RW, GC, APA).

In any case, to better understand the changes of the policy discourse, the following sections discuss in detail the five policy challenges' central discursive elements over time.

5.2. Infrastructure: The 'fundamental requirement' for digitalisation

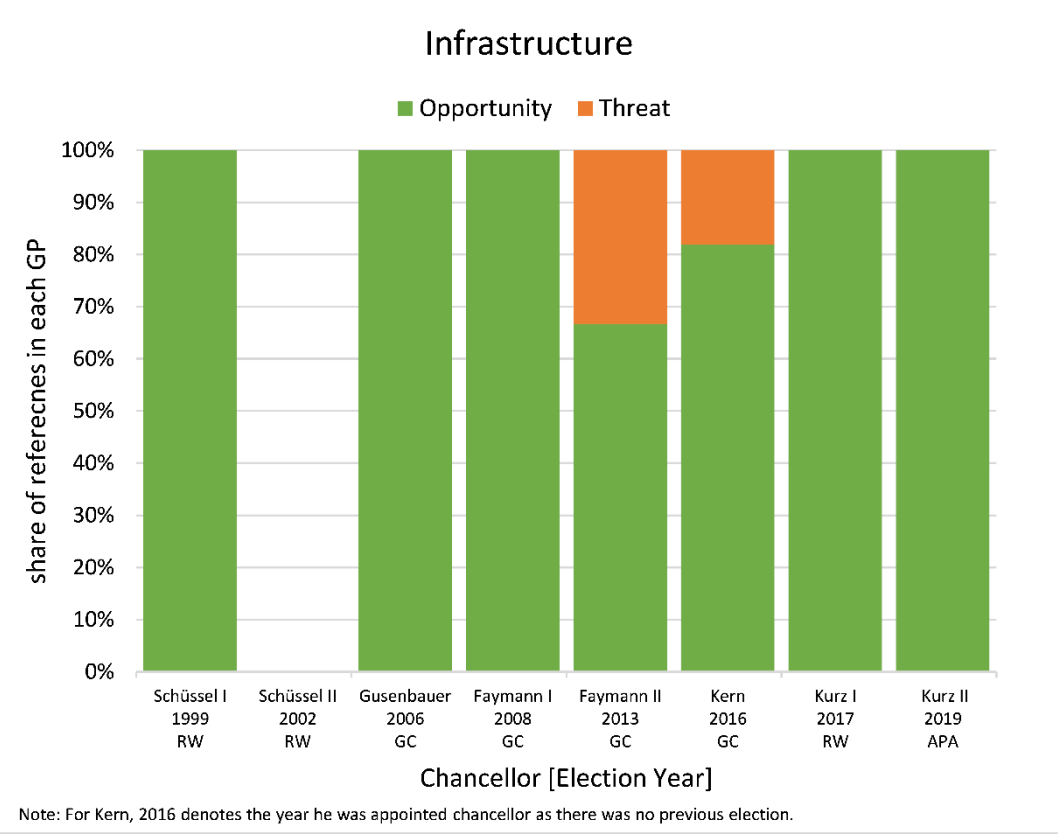

Figure 5: Coding result of policy challenge 'Infrastructure'

The central discursive elements of the infrastructure discourse can be summarised as the fundamental (2017, 76; 79)[4] requirement (2013, 23) that require rapid advancement (2006, 162; 2008, 65) to make Austria a leader (2016, 18; 2019, 316) and pioneer (2017, 80) in digital infrastructure. It is an opportunity discourse augmented by a sense of urgency and inevitability that requires necessary action. However, this recognition of the importance of infrastructure has been the result of a gradual process over the years. The 1999 GP consists of only a singular reference to infrastructure (see Table 6), followed by none in 2002 (see Figure 5) before high-quality broadband and glass fibre entered the agenda (2006, 162). The following GPs increasingly addressed the pervasive need for digital infrastructure (2013, 23), including making the required financial investments and regulatory changes (2016, 19; 2019, 317), especially in public institutions such as schools (2016, 18; 2017, 63; 2019, 316). Nonetheless, there are a few discursive borrowings from the threat discourse, most notably an emphasis on the digital divide (2013, 43) and a strategy to help the developing infrastructure in the countryside (2016, 22; 2017, 23).

This relatively late emphasis on digital infrastructure is somewhat surprising and possibly due to resting upon the early successes in Austrian digital public services in the early 2000s. While the infrastructure deployments were only gradually implemented, key policy makers appeared to be not concerned that the digital infrastructure required an immediate update following the technological improvements over the years. Nonetheless, it must be recognised that the recent push to overcome these deficiencies indicates a good outlook moving forward.

[4] For the following discussion, quotes of the government programme references are shortened to the respective Year & Page number to improve readability (e.g. Schüssel I 1999, 1 = 1999, 1). For the full list of GPs see Appendix 1.

5.3. PA reform: From efficiency gains to service-orientation

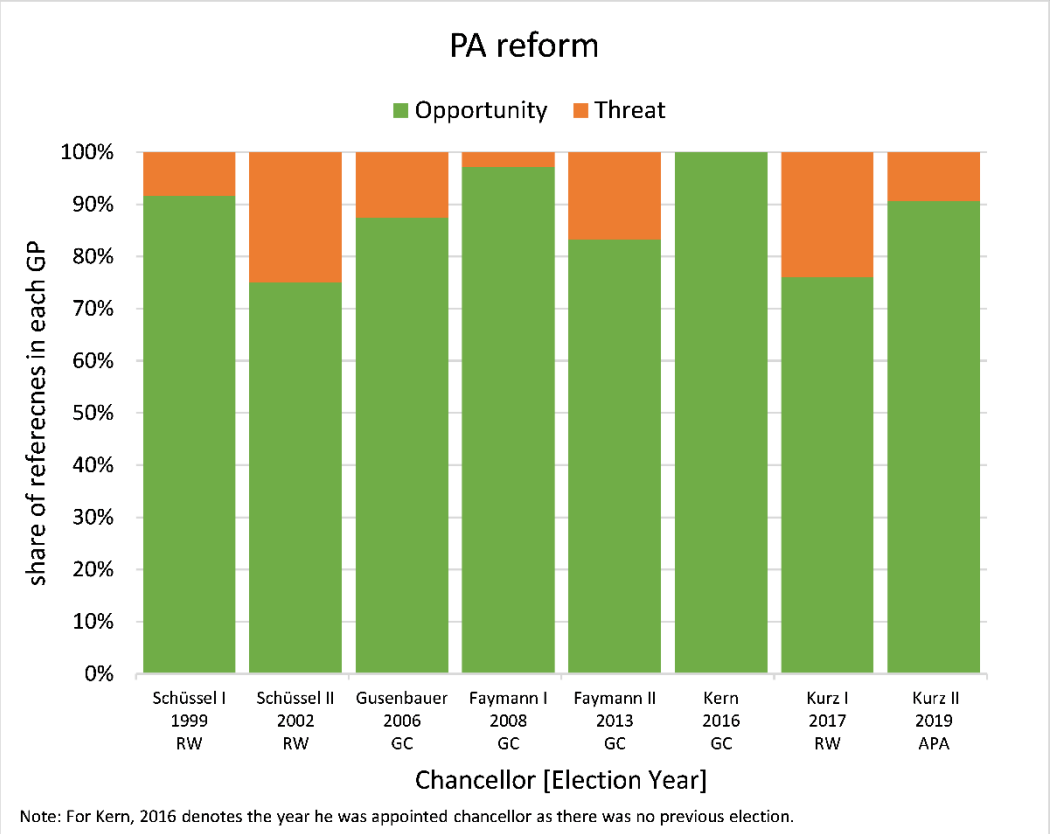

Figure 6: Coding result of policy challenge 'PA reform'

The PA reform policy challenge is the most comprehensive of all five policy challenges totalling 214 references. The central discursive elements of the PA reform discourse are increasing efficiency (1999, 66; 2006, 187; 2008, 34; 2013, 111; 2017, 46; 2019, 259), reducing bureaucracy (1999, 21; 2008, 169; 2013 17; 2017, 102; 2019, 26) by means of simplifying and connecting systems (2008, 92; 2013, 11) as well as deregulation (1999, 66; 2013, 17). These elements seem to be basic values of the Austrian PA reform discourse as they do not diverge between different governing coalition types (RW, GC, APA) across time. Only later, there is an increasing focus on a citizen- and service orientation (2013, 102; 2017, 80; 2019, 16), also suggesting a collective – albeit late - embrace of this value independent of government coalition type.

In terms of specific policies, there is an early understanding to develop e-government services such as a mobile phone signature (1999, 90), the connection of public data registers (1999, 77) and introducing the one-stop principle across public administration levels (1999, 77) in general and for legal business actions (company, land registers) in particular (1999, 67). This e-government push is continued with an electronic procurement and state funding (2002, 36) and drafting of the e-

government that institutionalised the ZMR as central IT institution housing e-government-services (2002, 36). Overall there is an embrace of all sorts of one-stop services in education, unemployment services (2006, 111) and health (2006, 118; 2013, 71; 2016, 19; 2017, 112). The main rationale is one of reducing the duration of proceedings and increase quality (1999, 16; 2006, 32; 2008, 56; 2013, 7; 2016, 19; 2017, 15; 2019, 10). It highlights the need for all authorities to have access to the relevant financial and social security data (2006, 33; 2016, 24) to set up digital services effectively.

Later, the policy discourse has developed to further fully digitalise the whole public administration (2017, 80), focusing on service improvement and understanding the importance of how interaction with citizens and companies (2017, 80; 2019, 26) can be facilitated. The is a consistent focus on public service provided by the justice system (1999, 67; 2002, 10; 2008, 133; 2013, 7; 2017, 42; 2019, 27). This is fostered with e-government (2013, 101) and public administration reform strategies (2013, 102) and digitalisation task forces (2017, 81), as well as simplifying internal functional responsibilities (2017, 81) the improve public administration processes.

The references assigned to the threat discourse are not numerous but prominent. They include an emphasis to secure barrier-free access to e-government (2002, 17; 2008, 265) and increasing citizen orientation (2006, 32; as well as opt-out options in services such as the electronic health database ELGA (2006, 115; 2017, 116) reducing efficiency gains. Another strong focus along this digital divide rhetoric is a consistent emphasis on how to support rural areas in this transformation (2008, 74; 2016, 23; 2017, 124; 2019, 273).

Other threat-based discursive elements of potential adverse effects on government employment if the efficiency gains through digitalisation were achieved, and potential risks of abuse of government power through (personal) data concentration are not addressed throughout the data set – with the exception of keeping a separation of personal data between authorities (2019, 320). This finding is insofar plausible, as state actors would not question the meaningfulness of their own policy agenda in a government programme.

Viewing these findings in light of the theoretical framework suggests that the PA reform approach has generally been successful, with a strong orientation towards achieving the efficiency gains promised by digitalisation. The emphasis on addressing concerns of the population concerning these public services such as ELGA is comprehensible, albeit may not be regarded as successful

in the strict as the metric upon which this to measure is one when many groups in fact sufficiently trust the safety and value of the services so not to need to opt-out altogether.

5.4. Economy: From competitiveness concerns to comprehensive strategies

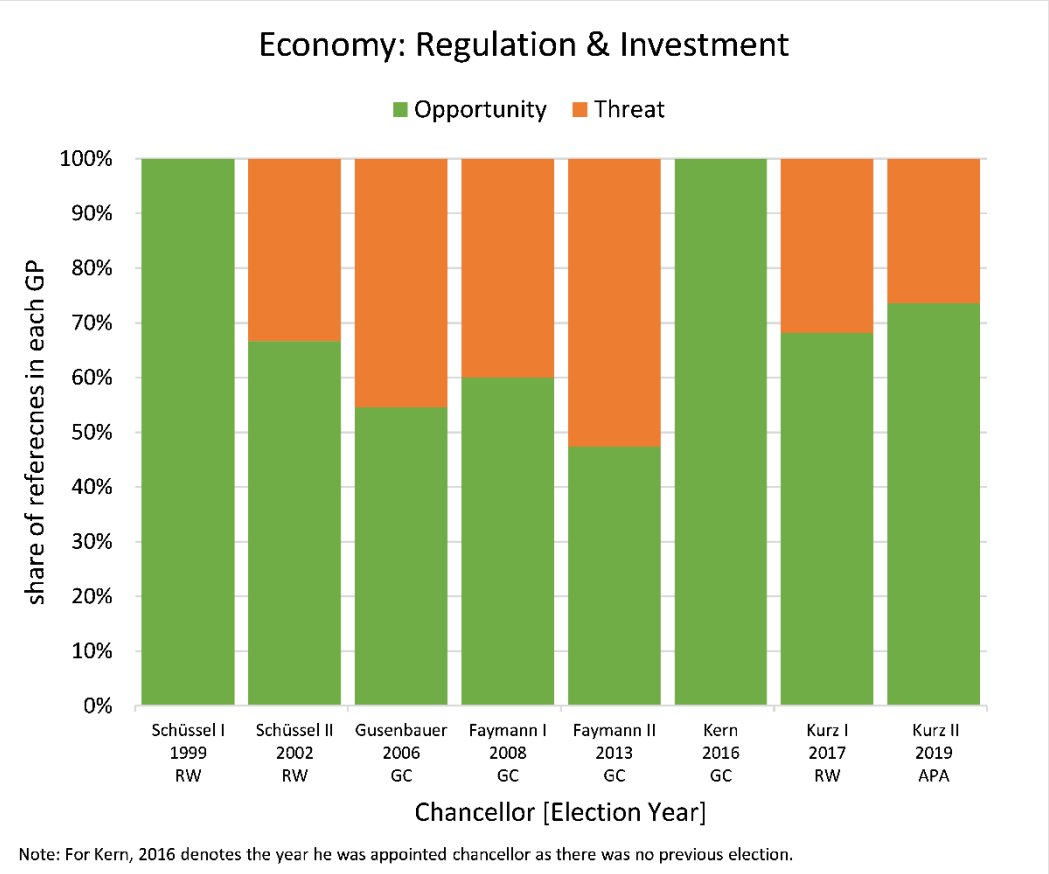

Figure 7: Coding result of policy challenge 'Economy'

The 'economy' policy challenge, i.e. how to modify private sector regulation and support investment, are assigned 193 references of the data set, making the second most number after PA reform. The discourse evolution is characterised by a majority opportunity-perception with a notable share of policies aimed at challenges rooted in the threat discourse – with the 1999 and 2016 GPs being two notable exceptions.

The major discursive elements rooted in the opportunity discourse are how to capture the innovation potential (1999, 66) of digitalisation as a transformative force (2017, 58) in order to remain competitive (2019, 320) in a digitalised and globalised world. In the beginning, the discourse is rooted in the ongoing change and awakening (1999, 86) of the new digital era (1999,

87) that leads to the convergence of media (1999, 66; 2008, 224) devices and networks and therefore requires a convergence of structures (2008, 224). There is an early reference to make "Austria Digital" (1999, 66) that sets out ways for the government to support the private sector in realising its innovation potential as well as supporting start-ups in the digital economy (1999, 66) and e-commerce (1999, 42; 66).

The competitiveness frame is exemplified by the focus on winning and the digital race between countries, which is either the goal to become a Top 3 ICT nation (2006, 162), an innovation leader (2017, 75) and a leading digital nation (2019, 315). To achieve this goal, wholesome digitalisation strategies have been designed that aim to develop the digital business sector (2013, 54; 2017, 75; 2019, 90). These strategies specifically target a simplification of regulation for the economy in the form of type approvals (2008, 260), permit exemptions and reductions (2013, 18; 2019, 81), application process simplifications (2013, 18; 2017, 83; 2017, 135; 2019, 25) as well as online business formation (2013, 7; 2017, 42; 2019, 30). The strategies also increasingly aim to support pilot private sector projects (2017, 81) with frontier digital technologies (AI, blockchain) (2019, 322) and explicit training for SMEs (2017, 83; 2019, 93) primarily justified to safeguard the competitiveness of Austria as a business location (2017, 58; 2019, 75), with a focus on innovation head-start in climate-friendly technologies (2019, 87). Note that the latter of these comprehensive strategies do not appear in the discourse evolution as late as 2013.

Other opportunities include the use of digital technologies for improving public services in pensions (2008, 174) and capital market services (e.g. digital debenture bonds) (2019, 70). Furthermore, throughout most GP, there is an understanding of to need to change data regulation concerning many policy fields such as government aid (2008, 272; 2013, 122), transportation and social security services (2006, 110; 2013, 17; 2017, 131). Over time there is also increasing embrace of open data (2013, 102; 2016, 19; 2017, 19; 2019, 320) and free access to information (2013, 99; 2019, 321) as the vehicle to create more transparency (2006 110; 2013, 122; 2017, 113; 2019, 321).

Only later comes a specific intention to regulate the digital platform economy fairly (2019, 322) and an embrace of digital opportunities to advance the climate agenda, such as electronic mobility, sustainable energy production (2016, 2; 2017, 48; 2019, 115) and efficient use (2017, 178). The means to achieve these objectives are also deeply rooted in the threat discourse as they appeal to openness to innovations in key technologies (2017, 178) and regulatory changes (2017, 148).

These technologies are also seen as vehicles to increase traffic safety and reduce emissions (2017, 153), especially in the framework of “smart cities” (2017, 164) and “smart factories” (2019, 322) but also sustainable energy communities on the local level (2019, 112). Similar, this opportunity perception to increase resource efficiency is dominated in the agriculture sector (2017, 160) and tourism (2017, 166; 2019, 165). The most recent GP firstly addresses the challenge of making digitalisation compatible within the Paris Climate Accord (2019, 119), indicating the adverse environmental aspects of the pervasive use of digital technologies in society.

There are three major issues of the ’economy’ policy challenge that are firmly rooted in the threat discourse. The first challenge is how to assist the public service broadcasting in fulfilling its public law mandate (2008, 225; 2017, 84; 2019, 55) to produce public value contents such as high-quality information provision and the preservation of cultural heritage (1999, 86; 2008, 235; 2017, 95) and participation (2006, 156; 2019, 46) – all the while being exposed to an increasingly competitive environment (2013, 55; 2017, 85; 2019, 53) driven by profit considerations and the dominance of overseas Internet companies (2017, 84; 2019, 53). This mandate has been under pressure as private online media crowds out public services that produce public value content. The governments tried to address this with a digitalisation strategy (2002, 32; 2008, 226) and later an even more fundamental policy agenda to address „key media-political questions” (2017, 86) that define the role and functionality of the public broadcasting system in the digital era. Making public content permanently available online is one of the reforms still to be implemented (2019, 55).

The second idea grounded in the threat discourse that has been continually addressed over the years is the digital challenge to copy and intellectual property (2006, 149; 2013, 54) and the resulting need to secure the digital rights of consumers and originators (2008, 122; 2013, 55; 2017, 94; 2019, 48). This relatively early focus on the question of copyright is notable in light of the still ongoing regulatory discussions to regulate property rights online on the EU level.

The third and most recent threat to enter the discourse is securing of the domestic market in light of global digital corporations that as “de facto monopolies” (2017, 84) predetermine the conditions in which domestic companies operate and threaten the national tax base employing tax evasion via licensing and patents, as well as outright fraud (2013, 106 & 116; 2017, 131). The strategy to address this issue has been ambivalent. While cross-national data sharing was early embraced (2013, 106), there was a refusal to commit to crucial regulatory reform such as abolishing bank secrecy (2013, 46). Only later the understanding that creating a level playing field (2017, 130) is

only possible by reigning in the dominance of big international digital companies introducing new tax concepts such as permanent digital establishments to recover the tax revenue (2017, 131; 2019, 82) and an outright digital tax (2017, 131; 2019, 11), on the grounds of achieving justice (2019, 176).

5.5. Skills & Research: A late embrace

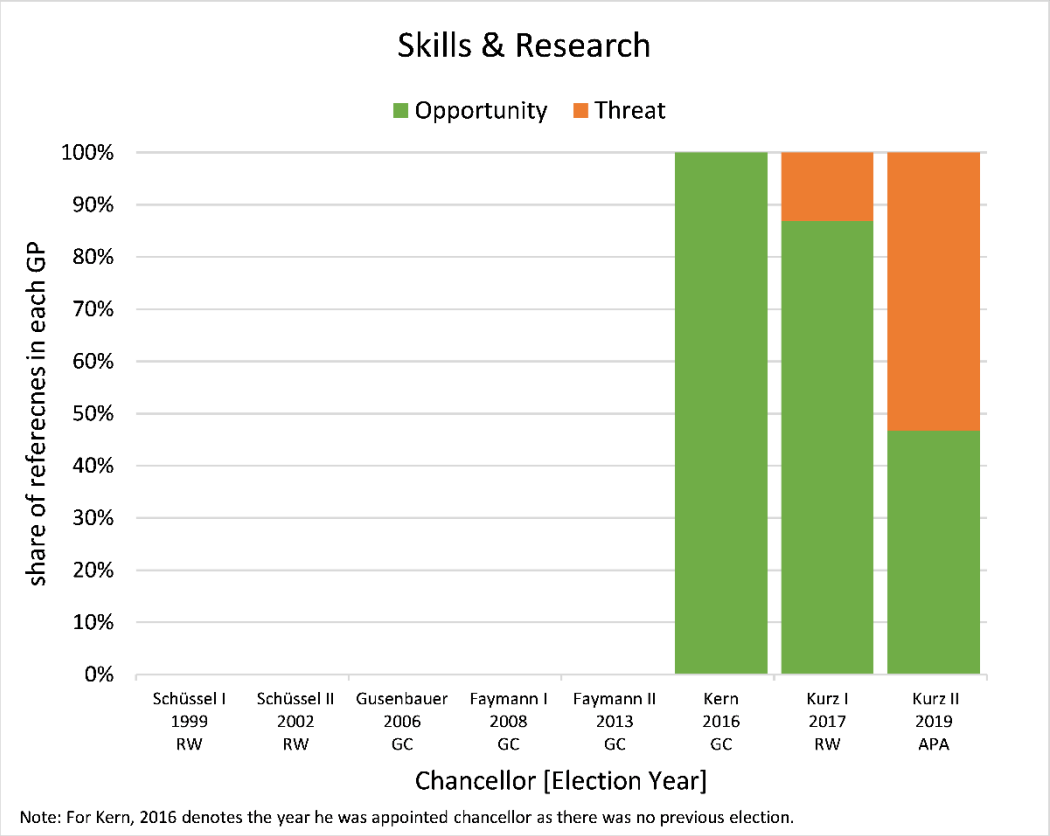

Figure 8: Coding result of policy challenge 'Skills & Research

The discourse analysis of the (professional) skills & research policy challenge reveals the late addressing the need to invest in digital skills and research. The issue only arises as late as 2016, after which all GPs increasingly prioritise hard and soft skills in schools (2019, 291), on a professional level (2017, 72; 2019, 168) as well as support research in digitalisation (2016, 15; 2017, 76; 2019, 312) in general and specifically on the university level (2016, 15; 2017, 75).

Overall, there is an opportunity-focus portraying digital skills as the vehicle to new economic prosperity and jobs, with a recent pivot to the threat discourse surrounding the future of work (2019, 256), and more specifically around negatively affected economic sectors (2019, 256). In

the aftermath of this, new policy priorities such as to invest in qualifications of the labour supply (2017, 71; 2019, 168) or recruit talents from abroad (2019, 87), as well as reform school (2016, 18; 2017, 65; 2019, 292), university (2017, 72) and apprenticeship curricula (2019, 300) emerged. Similarly appearing only recently in the policy agenda are initiatives for investments in digital infrastructure at schools (2013, 46; 2016, 16) and universities (2017, 73; 2019, 304) and new digital technologies in the private sector (2017, 75; 2019, 322).

Also, only later in the time frame appears the intention to improve the data availability and scope for research purposes (2017, 75; 2019, 246), the backbone for better understanding the digitalisation of the private and public sector (2017, 76; 2019, 165) with the establishment of a "Micro Data Center" (2019, 310) and improved access to existing databases such as the research infrastructure data base (2019, 313).

The late investments in digital skills and research pose the most major risk to the future success of Austrian digitalisation efforts. As these investments only render returns in the medium-term, a shortfall of a sufficiently skilled labour force and safe usage of digital competencies may inhibit other gains in the efforts to digitalise the economy and society.

5.6. Digital Space: Under threat

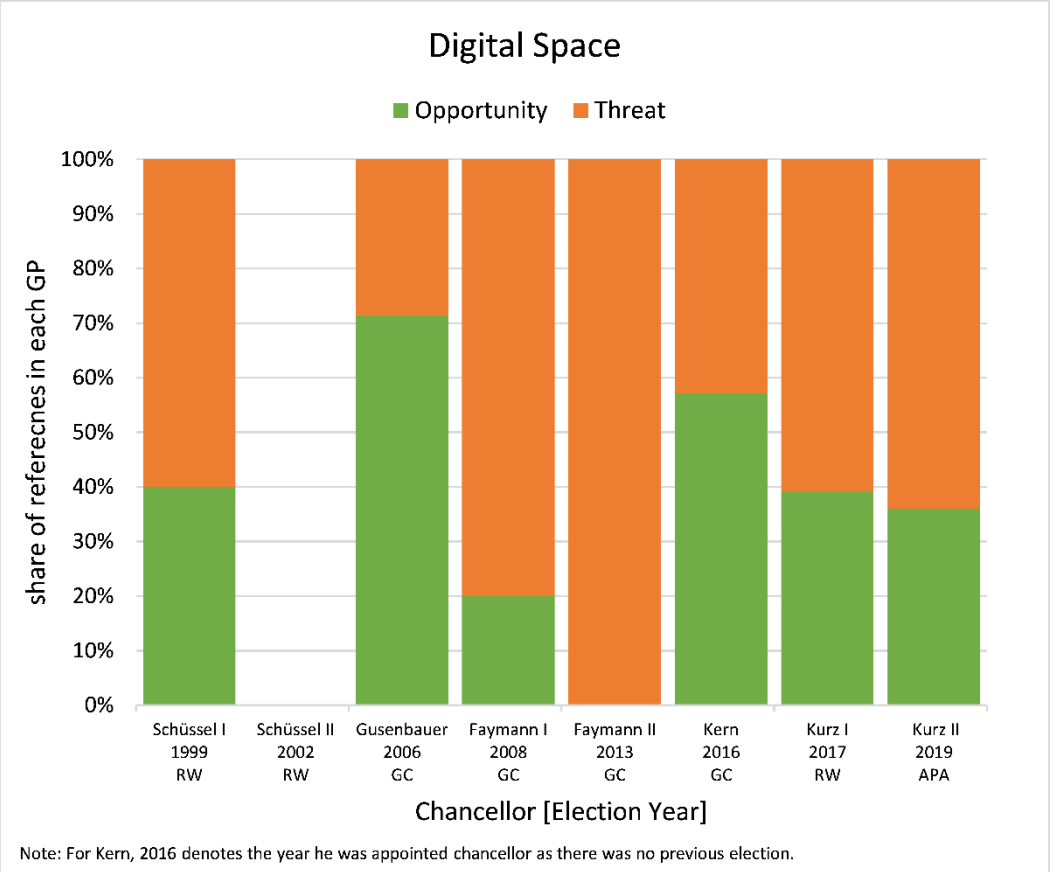

Figure 9: Coding result of policy challenge 'Digital Space'

The digital space challenge is the policy in Austria national discourse that comparatively lends itself most discursive elements from the threat discourse (see Figure 9). This embrace of the threat discourse already started out in 1999, emphasising the need to protect all constitutional rights in light of the digital revolution (1999, 66), in particular, the basic right to personal data protection (1999, 42; 2013, 82). However, at the same time, there is a continuous reference to the need to reform and modernise data protection (2006, 149; 2008, 105; 2013, 99; 2017, 81; 2019, 11) in order to muster enable digitalisation's opportunities.

At the same time, despite early intentions to increase the use of electronic media in education (1999, 66; 2013, 46), improving digital competencies in the sense of how to use digital media (2017, 104) only entered the centre stage of the policy response as late as 2016 (2016, 18). After which, actual policies to improve digital competencies, such as changing the professional training contents for teachers (2017, 82; 2019, 315) and an overall increase of funding (2019, 307), was introduced. Only later, specific initiatives concerning the social and ethical challenges of new

digital technologies such as artificial intelligence and robotics enter the discourse (2017, 28; 2019, 325).

There is also, rather late, a developing policy agenda surrounding the protection of privacy and other basic rights in the digital space (2019, 315). This also includes the addressing of adverse effects such as hate speech and online violence (2016, 26; 2019, 53) and fake news (2019, 225).

For the most part up until then, there has been a strong focus on security-related data usage that could enable fighting organized crime (1999, 47; 2008, 94) and illegal migration (2006, 6; 2019, 192), extremist threats (2013, 85; 2019, 218) new surveillance technologies (2006, 136; 2013, 87; 2016, 25; 2017, 31) and cyber security (2016, 26; 2017, 29; 2019, 214). Only recently, an understanding that digitalisation poses many security threats (2017, 32; 2019, 82) that also threatens technological sovereignty (2017, 32; 2019, 318) has been addressed.

CONCLUSION

This thesis presented a case study of Austrian government programmes to add to the emerging varieties-of-digitalisation literature. This line of literature has shown that national discursive contexts matter for the national policy response to seemingly common global problems such as digitalisation. The analysis addressed the research gap in this literature on how the coordinative policy discourse in such a national context has evolved over the years in order to understand better how government policymakers across parties and time perceive digitalisation.

The analysis identified five major elements that illustrate the evolution of the Austrian government policy response. First, the Austrian digitalisation discourse is overall based on a perception of digitalisation as an opportunity, specifically regarding its potential to increase the competitiveness of Austria's economy. This discursive focus on competitiveness is shaped by the passive reacting to the ongoing global and inevitable changes rather than the active shaping of society and its social realities employing digitalisation. However, concerns rooted in the threat discourse are also visibly present, including (1) recognising and addressing the threat of a digital divide in terms of access to digital public services and economic opportunities, especially along the urban-rural axis, (2) taking measures to secure the tax base against the dominance of global digital companies, (3) protecting the copyrights and income of originators, and (4) securing digital rights in an online environment challenged by privacy threats, cyber insecurity and fake news.

Second, 2017 marks a paradigm change in the Austrian discourse with the emergence of an all-pervasive understanding of digitalisation to affect all of society, not only limited spheres of the public sector and the (digital) economy. For most of the time frame subject to this analysis, Austrian government policymakers have considered digitalisation an issue solely concerning (electronic) digital public services, an area in which Austria consequently has seen successes compared to other countries.

Third, the two major omnipresent discursive elements across the whole time frame are the potential of digitalisation to reduce bureaucracy and increase efficiency in both public administration and the economy. A third central discursive element that emerges later in the time frame is the

innovation potential of digitalisation and its resulting economic and social opportunities such as climate policy, tourism, and frontier digital technologies.

Fourth, the comparatively late policy prioritisation on investments in skills and research to adapt to the challenges digitalisation poses to employment and competitiveness threaten the good trajectory of Austrian digitalisation efforts going forward. This finding warrants an increased awareness of the government and policymakers to follow up on their plans to increase investments and keep it a policy priority in the future.

Fifth, the analysis renders no evidence that the digital national coordinative discourse is significantly determined by the individual perceptions of digitalisation of individual political parties. Therefore, according to this analysis, the secondary hypothesis that changes in the national policy response may be driven by what parties are in government needs to be rejected.

The findings of this analysis corroborate the premise of the varieties-of-digitalisation literature that the „seemingly common trend“ digitalisation (Thelen 2018, 939) invokes different national policy responses. However, the relative strong perceived influence of global developments that enter the national context may limit the political leeway national policymakers have in response to a global phenomenon. For instance, retaining competitiveness in a global digital economy or securing digital rights online requires cross-national policy responses. Therefore, the varieties-of-digitalisation literature might want to put a stronger focus on how discourse coalitions across borders for those challenges that are the same in many countries, such as digital rights.

The limitations of this study include challenges to internal validity due to the focus on inductive coding. The narrow focus of the thesis on government programmes only represents an analysis of the coordinative function of Austrian discourse but not Austria’s national discourse as a whole. Moreover, the inductive coding limits the external validity of this thesis, albeit the focus on government programmes as a consistent data set over time offsets this shortfall slightly. Furthermore, as government programmes only cover policy intentions, the findings of this thesis only show how digitalisation is perceived by Austrian government policymakers but do not explain whether those policies were implemented and, if not, which ones and why.

Nonetheless, the specific focus on a singular data set has revealed some insights that can inform directions for future research within the varieties-of-digitalisation literature. Specifically, further

research may build on the useful typology of national discourses and add deeper analyses of specific national digital contexts. In terms of the Austrian case, this may include better understanding the late embrace of investing in skills and research and whether other countries' policy response has been different in this regard. Moreover, research may investigate the threats to how rights in the digital space are addressed differently across countries and how discourse coalitions across borders may be required to address them. Future research should go beyond the focus of this thesis on the coordinative discourse between policymakers but also include other discursive functions, i.e. how digital policies are communicated and the role of other stakeholders in politics, economy and civil society with regards to specific political problems driven by digitalisation such as the competitiveness of SMEs or tax justice. Furthermore, based on this analysis, future research may analyse the digitalisation discourse within political parties to better understand variations of the perception vis-a-vis digitalisation within those parties. Such an analysis could corroborate or reject the finding of this thesis that perceptions of government parties do not significantly determine a country's policy response to digitalisation.

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APPENDICES

Appendix 1. List of Government programmes & titles

1999: Schüssel I – Right-Wing (ÖVP-FPÖ): Österreich neu regieren. Koalitionsüberein-kommen.

2002: Schüssel II – Right-Wing (ÖVP-FPÖ): Regierungsprogramm der Österreichischen Bundesregierung für die XXII. Gesetzgebungsperiode.

2006: Gusenbauer – Grand-Coalition (SPÖ-ÖVP): Regierungsprogramm für die XXIII. Gesetzgebungsperiode.

2008: Faymann I – Grand-Coalition (SPÖ-ÖVP): Regierungsprogramm 2008–2013: Gemeinsam für Österreich–Regierungsprogramm für die XXIV. Gesetzgebungsperiode.

2013: Faymann II – Grand-Coalition (SPÖ-ÖVP): Arbeitsprogramm der österreichischen Bundesregierung für die Jahre 2013 bis 2018. Erfolgreich. Österreich.

2016: Kern – Grand-Coalition (SPÖ-ÖVP): Arbeitsprogramm der Bundesregierung 2017/2018. Für Österreich.

2017: Kurz I - Right-Wing (ÖVP-FPÖ): Zusammen. Für unser Österreich. Regierungsprogramm 2017-2022.

2019: Kurz II – Across the Political Aisle (ÖVP-Grüne): Aus Verantwortung für Österreich. Regierungsprogramm 2020, 2024.

Appendix 2. List of word clusters for keyword analysis

(1) chance+future+innovation				
chance innovation	chance	transparency	opportunity	potential
	founding	innovation	start-up	portal
	paperless	anonymous		
future	attractive	smart	improvement	top
	modern	progress	leader	future
	offensive	advantage		
(2) competition+transformation+efficiency				
competition	business location	competition	growth	positioning
	market	globalised	emigration	
transformation	transformation	era	urgent	change
	inevitable	swift	quick	accelerated
efficiency	bureaucracy	efficiency	optimal	connected
	synergy	effective		
(3) challenges+dangers				
dangers	dangers	discrimination	cyber	disadvantage
	divide	abuse	surveillance	hate
challenge	challenge	wholly	competence	
(4) citizens+rights+inclusion				
citizen-focus	customers	sovereignty	citizen-oriented	needs
	service-oriented	interactoin	accesible	trust
rights inclusion	basic rights	originator		
	sustainable	analogue	non-profit	child-oriented
	responsibility	barrier-free	just	common good
	low-threshold	democratic	fair	nationwide
	reconcilableness	open	affordable	

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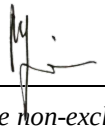

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