UNIVERSITÄT LUZERN

Swiss National Science Foundation
Ambizione
Wildhainweg 3
Postfach 8232
3001 Bern

Kultur- und Sozialwissenschaftliche Fakultät
Politikwissenschaftliches Seminar
Prof. Dr. Alexander H. Trechsel
Frohburgstrasse 3
6002 Luzern
alexander.trechsel@unilu.ch

Lucerne, 1 October 2020

Cover letter SNSF project application 'Digitalization and political conflict (DIGIPOL)'

Dear Sir, Dear Madam,

I would like to hereby submit the research project "Digitalization and political conflict: parties, voters, and electoral alignment (DIGIPOL)" to the Swiss National Science Foundation for SNSF project funding.

The proposed project is an innovative multi-method research effort that builds on previous research in the field of political behavior and political sociology. It provides a theoretical contribution to cleavage theory regarding what I frame as the "winners" and "losers" of digitalization. Empirically, the project investigates the socio-political consequences of digitalization, asking whether we can observe a division in society due to the differential impact of digitalization on citizens' lives, and the political materialization of this potential conflict, in terms of the political demand (voters) and supply side (political actors). The three empirical components of the project will lead to comprehensive insights regarding the political sociology of digitalization, political attitudes and behavior of citizens, political actors' dealing with digitalization issues, and the voters' reaction to the political offer on digitalization.

The project contributes to advancing theory and empirical knowledge regarding the impact of digitalization on society and politics.

Many thanks for your consideration and kind regards,

Prof. Dr. Alexander H. Trechsel
Professor of Political Science
Vice Rector of Research

mathilde.vanditmars@unilu.ch
www.unilu.ch

www.snf.ch
Wildhainweg 3, Postfach 8232, CH-3001 Bern

Application form mySNF

Instrument **Project funding in humanities and social sciences (division I)**

Part 1: General Information

Basic data

Project Title	Digitalization and political conflict: parties, voters, and electoral alignment (DIGIPOL)
Project title in English	Digitalization and political conflict: parties, voters, and electoral alignment (DIGIPOL)

Research Field	Social sciences
Main Discipline	10202 Political science
University	Universität Luzern - LU

Applicant(s)

Main Applicant	**Alexander Trechsel**

Grant Application

Amount requested (CHF)	Total	**880'744**
Requested starting date	**01.10.2021**	
Duration (max. 48 months)	**48**	

Attachments

Research plan	Science-part_Trechsel.pdf
CV and research output list	CV_Trechsel.pdf
	Output_Trechsel.pdf
Quotes	Offer_Demoscope.pdf
	Offer_Mobilab.pdf
	Offer_Polsan.pdf
Cover letter	CoverLetter_Trechsel.pdf

1. Lead Agency

Lead Agency chosen	No

2. Responsible applicant

Last name	**Trechsel**
First name	**Alexander**
Function (title)	Professor für Politikwissenschaft
Academic degree	Prof. Dr.
Date of birth	06.02.1971
Gender	male
Marital status	Unknown
Swiss social security number	756.7261.8595.92
Language	German
Nationality	Switzerland
Correspondence address of application	Address of workplace

Home address

Address supplement	
Street, No.	Bruchmattrain 5
P.O. Box	
Postcode / Zipcode	6003
Place	Luzern
Country	Switzerland

Address of institute

Name of Institution 1 (e.g. laboratory) *	Politikwissenschaftliches Seminar
Continuation 1 (e.g. inst /dept.)	Kultur- und Sozialwissenschaftliche Fakultät
Continuation 2 (e.g. University)	Universität Luzern
Street, No.	Frohburgstrasse 3
Address supplement 1 (e.g. building)	
Address supplement 2(e.g. office)	
P.O. Box	Postfach 4466
Postcode / Zipcode	6002
Place	Luzern
State, canton, etc.	LU
Country	Switzerland

Communication

Secretariat line	+41 41 229 55 91
Switchboard	
Direct line	+41 41 229 55 90
Fax office	
Home telephone number	+41 79 373 85 03
Cellphone	+41 79 373 85 03
Website	https://www.unilu.ch/personensuche/person/show/alexander-h-trechsel/
E-mail address	alexander.trechsel@unilu.ch

3. Other applicants

4. Applicants' employment

Information on employment and function at the anticipated starting date of the grant

Name	**Trechsel, Alexander**
Employment at the anticipated starting date of the grant	permanent contract
Level of employment %	100
Function in the context of this grant application	Head of (e.g. institute, department, center, clinic)
Professorship	Full professor
Doctorate (PhD)?	Yes
Date of doctorate (PhD)	22.04.1999
PhD supervisor	
Country of doctorate	Switzerland
Remarks	
Further employments	

5. Project partners

6. Basic data I

Original title	Digitalization and political conflict: parties, voters, and electoral alignment (DIGIPOL)
Title in English	Digitalization and political conflict: parties, voters, and electoral alignment (DIGIPOL)
Requested starting date	01.10.2021
Duration (max. 48 months)	48
Research field	Social sciences
Main discipline	10202 Political science
Sub-discipline(s)	10201 Sociology

7. Basic data II

Summary (Exerpt of the research plan, chapter 1)

What are the socio-political consequences of the digital revolution? As digitalization has profoundly impacted society, this study asks how this is reflected in public opinion, political behavior and partisan politics. The differential effects of the digital revolution – from which some individuals benefit, while others do not, aligning with or even amplifying existing inequalities – are expected to result in an emerging structural conflict between "winners and "losers" of digitalization. This study advances a theoretical contribution regarding the potential emergence of a new cleavage caused by the digital revolution. Traditionally, party systems have changed due to large processes, such as the industrial revolution or, more recently, globalization. We argue that digitalization constitutes a similarly profound technological change, affecting society and, consequentially, politics. Technological change induced by digitalization has already led to myriad regulations, legal frameworks and jurisprudence in just about every corner of the world and transnationally. Novel challenges and opportunities of digitalization increasingly enter the political arena. To what extent can the politicization of the digital revolution lead to the emergence of a new cleavage?

Empirically, this project provides new insights into the socio-political consequences of digitalization. It analyses to what extent we can observe a conflict in society between the winners and losers of digitalization, juxtaposing objective and subjective attitudes and conditions. Furthermore, the project investigates to what extent this potential conflict materializes politically. These two examples display the salience of digitalization issues among the public: some citizens' and groups' strong reactions to 5G enrolment (e.g. by attacking masts), and to the tools applied in the Covid-19 crisis (e.g. refusal to make use of Corona apps). However, it is unknown how citizens' attitudes on such issues are structured. Can we observe the alignment of citizens' positions on digitalization issues along a new line of conflict between the "winners" and "losers" of digitalization? In the political arena, the increase of issues regarding the digital society on the political agenda have already created unexpected political alliances. How do political actors deal with these issues? Political parties are expected not to currently align along this new line of conflict, and to be internally divided over issues regarding digitalization, leaving room for parties to cater to the emerging divide. To investigate these expectations, this project implements a mixed-method empirical strategy in the Swiss context, conducting focus groups, designing and implementing an original 2-wave survey with an experimental component using a voting advice application, and quantitative analysis of parliamentary proceedings, roll-call votes, and political party manifestos. The study ultimately leads to answering to what extent we can speak of an emerging socio-political conflict, and whether it has the potential to develop into a new cleavage.

The contribution of the study lies in the careful theorization of digital technology-induced political conflict through the lens of cleavage theory, as well as its empirical manifestations. Not only will this research help to better identify the societal challenges posed by continued digitalization, but also to provide new insights regarding citizens' attitudes towards digitalization issues. Finally, it will attempt to answer the questions of how political actors and parties deal with such issues, and how voters react to the political offer regarding the latter. The proposed study therefore strives to break new ground both in terms of theory and empirics, regarding pressing questions of political and social relevance.

Keywords	Public opinion
	Electoral behaviour

	Political sociology
	Digitalization
	Cleavage theory
	Electoral alignment
	Digital skills
	Digital inequality
	Party positions
Language of correspondence	German
Financial administration	Universität Luzern Finanz- und Rechnungswesen zHv Frau Doris Schmidli

8. Use-inspired project

Is your project use-inspired?	No

9. Re-submission

10. Continuation of

11. University or research institution

University	Universität Luzern - LU
Remarks	

12. Requested funding

Requested funding	**Total (CHF)**	**Year 1**	**Year 2**	**Year 3**	**Year 4**
Total (CHF)	**880'744**	**146'776**	**246'967**	**271'041**	**215'960**

Research funds	**Total (CHF)**	**Year 1**	**Year 2**	**Year 3**	**Year 4**
Travel	36'000	6'000	6'000	9'000	15'000
Conferences and workshops	30'000	0	10'000	0	20'000
Additional project costs (incl. consumables)	97'844	15'832	25'469	56'543	0
Direct costs of infrastructure use	5'000	5'000	0	0	0
Total (CHF)	**168'844**	**26'832**	**41'469**	**65'543**	**35'000**
Total (%)	**19%**	**18%**	**17%**	**24%**	**16%**

Salaries	**Total (CHF)**	**Year 1**	**Year 2**	**Year 3**	**Year 4**
Salary for postdoc (employees with a doctorate)	571'400	103'400	156'000	156'000	156'000
Salary for further employees	42'308	0	21'154	21'154	0
Total (CHF)	**613'708**	**103'400**	**177'154**	**177'154**	**156'000**
Total (%)	**70%**	**70%**	**72%**	**65%**	**72%**

Social security contributions	**Total (CHF)**	**Year 1**	**Year 2**	**Year 3**	**Year 4**
Social security contributions	98'192	16'544	28'344	28'344	24'960
Total (CHF)	**98'192**	**16'544**	**28'344**	**28'344**	**24'960**
Total (%)	**11%**	**11%**	**11%**	**10%**	**12%**

Details

Salary for postdoc (employees with a doctorate)	**Total (CHF)**	**Year 1**	**Year 2**	**Year 3**	**Year 4**

Main scientific collaborator: n.n.	416'300	103'400	104'300	104'300	104'300
Work-time percentage	Year 1: 100.00% | Year 2: 100.00% | Year 3: 100.00% | Year 4: 100.00%				
Social security contributions	Year 1: 16.00% | Year 2: 16.00% | Year 3: 16.00% | Year 4: 16.00%				
Relation to research plan / Comments / Additions	The post-doctoral researcher 1 will work closely together with the applicant. Post-doc 1 is the overall co-coordinator of the project and is responsible for the implementation and analysis of the focus groups, the survey implementation, and the manifesto data. The post-doctoral researcher will co-author the research output together with the applicant.				
Scientific collaborator 2: n.n.	155'100	0	51'700	51'700	51'700
Work-time percentage	Year 1: 0.00% | Year 2: 50.00% | Year 3: 50.00% | Year 4: 50.00%				
Social security contributions	Year 1: 0.00% | Year 2: 16.00% | Year 3: 16.00% | Year 4: 16.00%				
Relation to research plan / Comments / Additions	Post-doc 2 co-coordinates the big data and text analysis (roll-call votes, parliamentary proceedings) and the VAA development and implementation (including the media analysis and parties' self-placement), and co-authors 2 articles with the PI and post-doc 1.				
Employment period	01.10.2022 - 30.09.2025				
Total (CHF)	**571'400**	**103'400**	**156'000**	**156'000**	**156'000**
Total (%)	**65%**	**70%**	**63%**	**58%**	**72%**

Salary for further employees	**Total (CHF)**	**Year 1**	**Year 2**	**Year 3**	**Year 4**
Auxiliary scientific collaborator: n.n.	42'308	0	21'154	21'154	0
Work-time percentage	Year 1: 0.00% | Year 2: 35.00% | Year 3: 35.00% | Year 4: 0.00%				
Social security contributions	Year 1: 0.00% | Year 2: 16.00% | Year 3: 16.00% | Year 4: 0.00%				
Relation to research plan / Comments / Additions	The MA student hired for this project will be strongly in involved in the project. Research assistance is hired for survey translation, coding political party manifestos, transcribing the focus groups, collaborating in collecting the text corpus, and for the VAA development (e.g. testing, imputing party positions).				
Total (CHF)	**42'308**	**0**	**21'154**	**21'154**	**0**
Total (%)	**5%**	**0%**	**9%**	**8%**	**0%**

Travel	**Total (CHF)**	**Year 1**	**Year 2**	**Year 3**	**Year 4**
Travel	36'000	6'000	6'000	9'000	15'000
Relation to research plan / Comments / Additions	With these contributions it is planned to cover several conference participations in Europe and in the United States (EPSA, ECPR, APSA and MPSA). The applicant and the postdocs will divide the presence at conferences in the first three years of the project, which is estimated as 2 European conferences in the first year and second year, 1-2 European and 1 US conference in the third year. In the fourth year, both applicants and postdocs will jointly attend 2 European and 2 US conferences to ensure a wide dissemination of the findings of the project.				
Total (CHF)	**36'000**	**6'000**	**6'000**	**9'000**	**15'000**
Total (%)	**4%**	**4%**	**2%**	**3%**	**7%**

Conferences and workshops	**Total (CHF)**	**Year 1**	**Year 2**	**Year 3**	**Year 4**
Project workshop and dissemination conference	30'000	0	10'000	0	20'000
Relation to research plan / Comments / Additions	The project team will organize an international workshop in Spring 2023, (2 days, bringing in a number of international experts to discuss the project's preliminary results, get feedback and use them to prepare the survey). In the last year, we plan to organize an international disseminiation conference (Spring 2025).				
Total (CHF)	**30'000**	**0**	**10'000**	**0**	**20'000**
Total (%)	**3%**	**0%**	**4%**	**0%**	**9%**

Additional project costs (incl. consumables)	**Total (CHF)**	**Year 1**	**Year 2**	**Year 3**	**Year 4**

Distribution of survey	15'360	0	15'360	0	0
Relation to research plan / Comments / Additions	The distribution of the survey is performed by postal mail, as the sample is taken from a postal address base. For the first wave 10000 households are invited (B-post Massensendung), with a reminder letter sent 2 weeks after (90% of initial sample, by A-post). Since these costs exceed normal administrative costs regarding regular mail correspondence, these are included in the budget and estimated separately. The offer of Demoscope regarding the survey excludes these costs (see quote).				
Focus groups	15'832	15'832	0	0	0
Relation to research plan / Comments / Additions	Focus groups are held in the first year to inform the quantitative data collection (design of the survey) and receive more in-depth data regarding voters' attitudes and experiences. The focus groups are organised and conducted by Demoscope (see attached quote, excl. VAT which is added here). This sum also includes the costs for recruitment of participants and a compensation for their time.				
Representative 2-wave survey	56'543	0	0	56'543	0
Relation to research plan / Comments / Additions	The second empirical component of the research design is a two-wave survey (with an experimental component) among a representative sample of the Swiss population that is eligible to vote. The sampling and distribution of the survey is carried out by Demoscope. The costs are based on a concrete offer from Demoscope (offer uploaded as a separate document) to carry out the sampling, preparation and distribution of the different waves of the survey. The figures include VAT (7.7%) that are excluded from the uploaded offer.				
VAA design and implementation	10'109	0	10'109	0	0
Relation to research plan / Comments / Additions	A small team from Mobi Lab, consisting of a Product Manager, Web Engineer, and QA specialist, provides technical assistance in the implementation of the VAA. See attached quote from Mobi Lab.				
Total (CHF)	**97'844**	**15'832**	**25'469**	**56'543**	**0**
Total (%)	**11%**	**11%**	**10%**	**21%**	**0%**

Direct costs of infrastructure use	**Total (CHF)**	**Year 1**	**Year 2**	**Year 3**	**Year 4**
POLITmonitor database	5'000	5'000	0	0	0
Relation to research plan / Comments / Additions	A collaboration with Polsan AG (a policy analysis and consultancy agency), co-developer of the POLITmonitor, allows the project team to analyse this database regarding all relevant bills and motions in cantonal parliaments (see attached letter of intent).				
Total (CHF)	**5'000**	**5'000**	**0**	**0**	**0**
Total (%)	**1%**	**3%**	**0%**	**0%**	**0%**

Social security contributions	**Total (CHF)**	**Year 1**	**Year 2**	**Year 3**	**Year 4**
Auxiliary scientific collaborator: n.n.	6'768	0	3'384	3'384	0
Main scientific collaborator: n.n.	66'608	16'544	16'688	16'688	16'688
Scientific collaborator 2: n.n.	24'816	0	8'272	8'272	8'272
Total (CHF)	**98'192**	**16'544**	**28'344**	**28'344**	**24'960**
Total (%)	**11%**	**11%**	**11%**	**10%**	**12%**

13. Research requiring authorisation or notification

HRA-relevant and HRA-irrelevant research involving humans	No
Research on human embryonic stem cells	No
Research on animals	No
Research on GMO or pathogens	No

14. Fellowships for a research stay abroad

Requires adherence to Swiss laws and ethical guidelines as well as confirmation from the host institution that the legal provisions have been followed	No

15. 3R – Replace, Reduce, Refine

Project does not involve any animal experiments	No
Project involves experiments with animals that fall under the Animal Welfare Act (vertebrates, cephalopods, crayfish) and takes account of the 3R	No
Project is a 3R research project focusing on "Replace"	No
Project is a 3R research project focusing on "Reduce"	No
Project is a 3R research project focusing on "Refine"	No

16. Access and Benefit Sharing (ABS)

17. Awareness of the relevant regulations

Relevant regulations noted and accepted	Yes

18. General remarks on the project

Subject	
Communication	
Confidential	No

www.snf.ch
Wildhainweg 3, Postfach 8232, CH-3001 Bern

Application form mySNF

Instrument **Project funding in humanities and social sciences (division I)**

Part 1: General Information

Basic data

Project Title	Digitalization and political conflict: parties, voters, and electoral alignment (DIGIPOL)
Project title in English	Digitalization and political conflict: parties, voters, and electoral alignment (DIGIPOL)

Research Field	Social sciences	
Main Discipline	10202 Political science	
University	Universität Luzern - LU	

Applicant(s)

Main Applicant	**Alexander Trechsel**	

Grant Application

Amount requested (CHF)	Total	**880'744**
Requested starting date	**01.10.2021**	
Duration (max. 48 months)	**48**	

Attachments

1. Lead Agency

Lead Agency chosen	No

2. Responsible applicant

Last name	**Trechsel**
First name	**Alexander**
Function (title)	Professor für Politikwissenschaft
Academic degree	Prof. Dr.
Date of birth	06.02.1971
Gender	männlich
Marital status	unbekannt
Swiss social security number	756.7261.8595.92
Language	Deutsch
Nationality	Schweiz
Correspondence address of application	Address of workplace

Home address

Address supplement	
Street, No.	Bruchmattrain 5
P.O. Box	
Postcode / Zipcode	6003
Place	Luzern
Country	Schweiz

Address of institute

Name of Institution 1 (e.g. laboratory) *	Politikwissenschaftliches Seminar
Continuation 1 (e.g. inst /dept.)	Kultur- und Sozialwissenschaftliche Fakultät
Continuation 2 (e.g. University)	Universität Luzern
Street, No.	Frohburgstrasse 3
Address supplement 1 (e.g. building)	
Address supplement 2(e.g. office)	
P.O. Box	Postfach 4466
Postcode / Zipcode	6002
Place	Luzern
State, canton, etc.	LU
Country	Schweiz

Communication

Secretariat line	+41 41 229 55 91
Switchboard	
Direct line	+41 41 229 55 90
Fax office	
Home telephone number	+41 79 373 85 03
Cellphone	+41 79 373 85 03
Website	https://www.unilu.ch/personensuche/person/show/alexander-h-trechsel/
E-mail address	alexander.trechsel@unilu.ch

3. Other applicants

4. Applicants' employment

Information on employment and function at the anticipated starting date of the grant

Name	**Trechsel, Alexander**
Employment at the anticipated starting date of the grant	unbefristet
Level of employment %	100
Function in the context of this grant application	Leiter/in (z.B. eines Instituts, Departements, einer Klinik)
Professorship	Ordentliche Professur
Doctorate (PhD)?	Yes
Date of doctorate (PhD)	22.04.1999
PhD supervisor	
Country of doctorate	Schweiz
Remarks	
Further employments	

5. Project partners

6. Basic data I

Original title	Digitalization and political conflict: parties, voters, and electoral alignment (DIGIPOL)
Title in English	Digitalization and political conflict: parties, voters, and electoral alignment (DIGIPOL)
Requested starting date	01.10.2021
Duration (max. 48 months)	48
Research field	Social sciences
Main discipline	10202 Political science
Sub-discipline(s)	10201 Sociology

7. Basic data II

Summary (Exerpt of the research plan, chapter 1)

What are the socio-political consequences of the digital revolution? As digitalization has profoundly impacted society, this study asks how this is reflected in public opinion, political behavior and partisan politics. The differential effects of the digital revolution – from which some individuals benefit, while others do not, aligning with or even amplifying existing inequalities – are expected to result in an emerging structural conflict between "winners and "losers" of digitalization. This study advances a theoretical contribution regarding the potential emergence of a new cleavage caused by the digital revolution. Traditionally, party systems have changed due to large processes, such as the industrial revolution or, more recently, globalization. We argue that digitalization constitutes a similarly profound technological change, affecting society and, consequentially, politics. Technological change induced by digitalization has already led to myriad regulations, legal frameworks and jurisprudence in just about every corner of the world and transnationally. Novel challenges and opportunities of digitalization increasingly enter the political arena. To what extent can the politicization of the digital revolution lead to the emergence of a new cleavage?

Empirically, this project provides new insights into the socio-political consequences of digitalization. It analyses to what extent we can observe a conflict in society between the winners and losers of digitalization, juxtaposing objective and subjective attitudes and conditions. Furthermore, the project investigates to what extent this potential conflict materializes politically. These two examples display the salience of digitalization issues among the public: some citizens' and groups' strong reactions to 5G enrolment (e.g. by attacking masts), and to the tools applied in the Covid-19 crisis (e.g. refusal to make use of Corona apps). However, it is unknown how citizens' attitudes on such issues are structured. Can we observe the alignment of citizens' positions on digitalization issues along a new line of conflict between the "winners" and "losers" of digitalization? In the political arena, the increase of issues regarding the digital society on the political agenda have already created unexpected political alliances. How do political actors deal with these issues? Political parties are expected not to currently align along this new line of conflict, and to be internally divided over issues regarding digitalization, leaving room for parties to cater to the emerging divide. To investigate these expectations, this project implements a mixed-method empirical strategy in the Swiss context, conducting focus groups, designing and implementing an original 2-wave survey with an experimental component using a voting advice application, and quantitative analysis of parliamentary proceedings, roll-call votes, and political party manifestos. The study ultimately leads to answering to what extent we can speak of an emerging socio-political conflict, and whether it has the potential to develop into a new cleavage.

The contribution of the study lies in the careful theorization of digital technology-induced political conflict through the lens of cleavage theory, as well as its empirical manifestations. Not only will this research help to better identify the societal challenges posed by continued digitalization, but also to provide new insights regarding citizens' attitudes towards digitalization issues. Finally, it will attempt to answer the questions of how political actors and parties deal with such issues, and how voters react to the political offer regarding the latter. The proposed study therefore strives to break new ground both in terms of theory and empirics, regarding pressing questions of political and social relevance.

Keywords	Public opinion
	Electoral behaviour

	Political sociology
	Digitalization
	Cleavage theory
	Electoral alignment
	Digital skills
	Digital inequality
	Party positions
Language of correspondence	German
Financial administration	Universität Luzern Finanz- und Rechnungswesen zHv Frau Doris Schmidli

8. Use-inspired project

Is your project use-inspired?	No

9. Re-submission

10. Continuation of

11. University or research institution

University	Universität Luzern - LU
Remarks	

12. Requested funding

Requested funding	**Total (CHF)**	**Year 1**	**Year 2**	**Year 3**	**Year 4**
Total (CHF)	**880'744**	**146'776**	**246'967**	**271'041**	**215'960**

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Direct costs of infrastructure use	5'000	5'000	0	0	0
Total (CHF)	**168'844**	**26'832**	**41'469**	**65'543**	**35'000**
Total (%)	**19%**	**18%**	**17%**	**24%**	**16%**

Salaries	**Total (CHF)**	**Year 1**	**Year 2**	**Year 3**	**Year 4**
Salary for postdoc (employees with a doctorate)	571'400	103'400	156'000	156'000	156'000
Salary for further employees	42'308	0	21'154	21'154	0
Total (CHF)	**613'708**	**103'400**	**177'154**	**177'154**	**156'000**
Total (%)	**70%**	**70%**	**72%**	**65%**	**72%**

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Total (%)	**11%**	**11%**	**11%**	**10%**	**12%**

Details

Salary for postdoc (employees with a doctorate)	**Total (CHF)**	**Year 1**	**Year 2**	**Year 3**	**Year 4**

Main scientific collaborator: n.n.	416'300	103'400	104'300	104'300	104'300
Work-time percentage	Year 1: 100.00% | Year 2: 100.00% | Year 3: 100.00% | Year 4: 100.00%				
Social security contributions	Year 1: 16.00% | Year 2: 16.00% | Year 3: 16.00% | Year 4: 16.00%				
Relation to research plan / Comments / Additions	The post-doctoral researcher 1 will work closely together with the applicant. Post-doc 1 is the overall co-coordinator of the project and is responsible for the implementation and analysis of the focus groups, the survey implementation, and the manifesto data. The post-doctoral researcher will co-author the research output together with the applicant.				
Scientific collaborator 2: n.n.	155'100	0	51'700	51'700	51'700
Work-time percentage	Year 1: 0.00% | Year 2: 50.00% | Year 3: 50.00% | Year 4: 50.00%				
Social security contributions	Year 1: 0.00% | Year 2: 16.00% | Year 3: 16.00% | Year 4: 16.00%				
Relation to research plan / Comments / Additions	Post-doc 2 co-coordinates the big data and text analysis (roll-call votes, parliamentary proceedings) and the VAA development and implementation (including the media analysis and parties' self-placement), and co-authors 2 articles with the PI and post-doc 1.				
Employment period	01.10.2022 - 30.09.2025				
Total (CHF)	**571'400**	**103'400**	**156'000**	**156'000**	**156'000**
Total (%)	**65%**	**70%**	**63%**	**58%**	**72%**

Salary for further employees	**Total (CHF)**	**Year 1**	**Year 2**	**Year 3**	**Year 4**
Auxiliary scientific collaborator: n.n.	42'308	0	21'154	21'154	0
Work-time percentage	Year 1: 0.00% | Year 2: 35.00% | Year 3: 35.00% | Year 4: 0.00%				
Social security contributions	Year 1: 0.00% | Year 2: 16.00% | Year 3: 16.00% | Year 4: 0.00%				
Relation to research plan / Comments / Additions	The MA student hired for this project will be strongly in involved in the project. Research assistance is hired for survey translation, coding political party manifestos, transcribing the focus groups, collaborating in collecting the text corpus, and for the VAA development (e.g. testing, imputing party positions).				
Total (CHF)	**42'308**	**0**	**21'154**	**21'154**	**0**
Total (%)	**5%**	**0%**	**9%**	**8%**	**0%**

Travel	**Total (CHF)**	**Year 1**	**Year 2**	**Year 3**	**Year 4**
Travel	36'000	6'000	6'000	9'000	15'000
Relation to research plan / Comments / Additions	With these contributions it is planned to cover several conference participations in Europe and in the United States (EPSA, ECPR, APSA and MPSA). The applicant and the postdocs will divide the presence at conferences in the first three years of the project, which is estimated as 2 European conferences in the first year and second year, 1-2 European and 1 US conference in the third year. In the fourth year, both applicants and postdocs will jointly attend 2 European and 2 US conferences to ensure a wide dissemination of the findings of the project.				
Total (CHF)	**36'000**	**6'000**	**6'000**	**9'000**	**15'000**
Total (%)	**4%**	**4%**	**2%**	**3%**	**7%**

Conferences and workshops	**Total (CHF)**	**Year 1**	**Year 2**	**Year 3**	**Year 4**
Project workshop and dissemination conference	30'000	0	10'000	0	20'000
Relation to research plan / Comments / Additions	The project team will organize an international workshop in Spring 2023, (2 days, bringing in a number of international experts to discuss the project's preliminary results, get feedback and use them to prepare the survey). In the last year, we plan to organize an international disseminiation conference (Spring 2025).				
Total (CHF)	**30'000**	**0**	**10'000**	**0**	**20'000**
Total (%)	**3%**	**0%**	**4%**	**0%**	**9%**

Additional project costs (incl. consumables)	**Total (CHF)**	**Year 1**	**Year 2**	**Year 3**	**Year 4**

Distribution of survey	15'360	0	15'360	0	0
Relation to research plan / Comments / Additions	The distribution of the survey is performed by postal mail, as the sample is taken from a postal address base. For the first wave 10000 households are invited (B-post Massensendung), with a reminder letter sent 2 weeks after (90% of initial sample, by A-post). Since these costs exceed normal administrative costs regarding regular mail correspondence, these are included in the budget and estimated separately. The offer of Demoscope regarding the survey excludes these costs (see quote).				
Focus groups	15'832	15'832	0	0	0
Relation to research plan / Comments / Additions	Focus groups are held in the first year to inform the quantitative data collection (design of the survey) and receive more in-depth data regarding voters' attitudes and experiences. The focus groups are organised and conducted by Demoscope (see attached quote, excl. VAT which is added here). This sum also includes the costs for recruitment of participants and a compensation for their time.				
Representative 2-wave survey	56'543	0	0	56'543	0
Relation to research plan / Comments / Additions	The second empirical component of the research design is a two-wave survey (with an experimental component) among a representative sample of the Swiss population that is eligible to vote. The sampling and distribution of the survey is carried out by Demoscope. The costs are based on a concrete offer from Demoscope (offer uploaded as a separate document) to carry out the sampling, preparation and distribution of the different waves of the survey. The figures include VAT (7.7%) that are excluded from the uploaded offer.				
VAA design and implementation	10'109	0	10'109	0	0
Relation to research plan / Comments / Additions	A small team from Mobi Lab, consisting of a Product Manager, Web Engineer, and QA specialist, provides technical assistance in the implementation of the VAA. See attached quote from Mobi Lab.				
Total (CHF)	**97'844**	**15'832**	**25'469**	**56'543**	**0**
Total (%)	**11%**	**11%**	**10%**	**21%**	**0%**

Direct costs of infrastructure use	**Total (CHF)**	**Year 1**	**Year 2**	**Year 3**	**Year 4**
POLITmonitor database	5'000	5'000	0	0	0
Relation to research plan / Comments / Additions	A collaboration with Polsan AG (a policy analysis and consultancy agency), co-developer of the POLITmonitor, allows the project team to analyse this database regarding all relevant bills and motions in cantonal parliaments (see attached letter of intent).				
Total (CHF)	**5'000**	**5'000**	**0**	**0**	**0**
Total (%)	**1%**	**3%**	**0%**	**0%**	**0%**

Social security contributions	**Total (CHF)**	**Year 1**	**Year 2**	**Year 3**	**Year 4**
Auxiliary scientific collaborator: n.n.	6'768	0	3'384	3'384	0
Main scientific collaborator: n.n.	66'608	16'544	16'688	16'688	16'688
Scientific collaborator 2: n.n.	24'816	0	8'272	8'272	8'272
Total (CHF)	**98'192**	**16'544**	**28'344**	**28'344**	**24'960**
Total (%)	**11%**	**11%**	**11%**	**10%**	**12%**

13. Research requiring authorisation or notification

HRA-relevant and HRA-irrelevant research involving humans	No
Research on human embryonic stem cells	No
Research on animals	No
Research on GMO or pathogens	No

14. Fellowships for a research stay abroad

Requires adherence to Swiss laws and ethical guidelines as well as confirmation from the host institution that the legal provisions have been followed	No

15. 3R – Replace, Reduce, Refine

Project does not involve any animal experiments	No
Project involves experiments with animals that fall under the Animal Welfare Act (vertebrates, cephalopods, crayfish) and takes account of the 3R	No
Project is a 3R research project focusing on "Replace"	No
Project is a 3R research project focusing on "Reduce"	No
Project is a 3R research project focusing on "Refine"	No

16. Access and Benefit Sharing (ABS)

17. Awareness of the relevant regulations

Relevant regulations noted and accepted	Yes

18. General remarks on the project

Subject	
Communication	
Confidential	No

Digitalization and political conflict: parties, voters, and electoral alignment (DIGIPOL)

1. Summary

What are the socio-political consequences of the digital revolution? As digitalization has profoundly impacted society, this study asks how this is reflected in public opinion, political behavior and partisan politics. The differential effects of the digital revolution – from which some individuals benefit, while others do not, aligning with or even amplifying existing inequalities – are expected to result in an emerging structural conflict between "winners and "losers" of digitalization. This study advances a theoretical contribution regarding the potential emergence of a new cleavage caused by the digital revolution. Traditionally, party systems have changed due to large processes, such as the industrial revolution or, more recently, globalization. We argue that digitalization constitutes a similarly profound technological change, affecting society and, consequentially, politics. Technological change induced by digitalization has already led to myriad regulations, legal frameworks and jurisprudence in just about every corner of the world and transnationally. Novel challenges and opportunities of digitalization increasingly enter the political arena. To what extent can the politicization of the digital revolution lead to the emergence of a new cleavage?

Empirically, this project provides new insights into the socio-political consequences of digitalization. It analyses to what extent we can observe a conflict in society between the winners and losers of digitalization, juxtaposing objective and subjective attitudes and conditions. Furthermore, the project investigates to what extent this potential conflict materializes politically. These two examples display the salience of digitalization issues among the public: some citizens' and groups' strong reactions to 5G enrolment (e.g. by attacking masts), and to the tools applied in the Covid-19 crisis (e.g. refusal to make use of Corona apps). However, it is unknown how citizens' attitudes on such issues are structured. Can we observe the alignment of citizens' positions on digitalization issues along a new line of conflict between the "winners" and "losers" of digitalization? In the political arena, the increase of issues regarding the digital society on the political agenda have already created unexpected political alliances. How do political actors deal with these issues? Political parties are expected not to currently align along this new line of conflict, and to be internally divided over issues regarding digitalization, leaving room for parties to cater to the emerging divide. To investigate these expectations, this project implements a mixed-method empirical strategy in the Swiss context, conducting focus groups, designing and implementing an original 2-wave survey with an experimental component using a voting advice application, and quantitative analysis of parliamentary proceedings, roll-call votes, and political party manifestos. The study ultimately leads to answering to what extent we can speak of an emerging socio-political conflict, and whether it has the potential to develop into a new cleavage.

The contribution of the study lies in the careful theorization of digital technology-induced political conflict through the lens of cleavage theory, as well as its empirical manifestations. Not only will this research help to better identify the societal challenges posed by continued digitalization, but also to provide new insights regarding citizens' attitudes towards digitalization issues. Finally, it will attempt to answer the questions of how political actors and parties deal with such issues, and how voters react to the political offer regarding the latter. The proposed study therefore strives to break new ground both in terms of theory and empirics, regarding pressing questions of political and social relevance.

2. Research plan

2.1 *Current state of research in the field*

The digital revolution has caused myriad advances in our societies, fostering high levels of social and economic change that have impacted the lives of all citizens. While for some the digital revolution has been a positive force of change, others see life – or at least aspects of the latter – as they know it being threatened by these developments. Moreover, the digital society requires citizens to adapt and the necessary skills and attitudes to do so are not distributed equally across all strata of society. This study investigates firstly to what extent we can observe a potential new conflict, caused by the digital revolution, between two opposing groups: the "winners" and "losers" of digitalization, and, secondly, to what extent this has materialized politically so far, and what further potential it constitutes to do so. The outcomes will provide an answer to the question whether we can speak of a new socio-political conflict or even a cleavage. The study is situated at the intersection of political behaviour and political sociology. This section discusses the state of the art in these respective fields relevant to the endeavours of this project and identifies the questions and gaps that this study addresses.

Digital transformation and governing the digital society

The developments in recent decades in terms of digital and technological change have been so vast that they have been considered to constitute a new industrial revolution. While the first industrial revolution mechanized production powered by water and steam, the second created mass production using electric power. The third industrial revolution used electronics and information technology for automation, also called the digital revolution. We are now witnessing the "Fourth Industrial Revolution" that builds on the third one, which is characterized by a fusion of several new technologies, blurring the line between the physical, digital and biological, with consequences for all citizens and industries worldwide (Schwab 2017).

The possibilities offered by digital developments have altered many facets of society, with large economic consequences. The sharing economy has been on the rise in recent years and impacts the way consumers travel, shop, and commute (Koopman *et al.* 2014, Erickson and Sørensen 2016). The advancements put forward by these developments provide challenges and opportunities for both sides of the economy. While these transformations provide opportunities for raising global income levels, at the same time they foster greater inequality, thus creating economic winners and losers, a process accompanied by increased divergencies between lower and higher skilled workers. Technological change has impacted the labor market by fostering a decline in middle-skilled occupations, leading to patterns of job polarization (Peugny 2019). These developments most positively impact those already relatively better off: non-routine, high-skilled workers with cognitively demanding jobs, benefit most from workplace digitalization (Kurer and Gallego 2019). Similar divides are observed among businesses who embrace new technology, seek novel business opportunities in the digital world and the

sharing economy, versus those who hold on to traditional business models (Brynjolfsson and McAfee 2011).

Digitalization fosters vast changes that call for regulation, but the technological advancements often develop faster than the governance of the latter. A case in point are two of the largest players in the sharing economy, Uber and AirBnB, that have largely impacted their sectors and proved a challenge for (domestic) regulations (Geist and Tremblay-Huet 2018). Other issues regarding the digital society that currently rank high on the political agenda are, for example, the implementation of 5G infrastructure, telecom market regulations, e-health, e-gambling, the governance of the platform economy, privacy, data protection, and so on. The call for regulation in this field has been challenging for law- and policymakers around the globe. Recently, Switzerland has stopped the further rollout of 5G technology in response to health concerns (Jones 2020). Issues regarding the digital society are not only high on the federal government's agenda, but also on the side of the public. Some of these issues foster strong reactions from citizens and are at the basis of conspiracy theories (Uscinski 2020). For example, such theories have recently linked Covid-19 to 5G without any evidence, but nevertheless, people have acted upon this misinformation by attacking mobile phone masts, most notably in the UK, The Netherlands, and other European countries (Di Stefano *et al.* 2020, Quinn 2020). Parts of the wider public are also reluctant to make use of digital technologies to help reducing the spread of Covid-19. Importantly, in Switzerland the number of popular initiatives proposed around the topic of digitalization[1] demonstrates the salience of governance of the digital society. The issues related to the digitalization of society are, however, not only limited to national governments. Also at the sub-national level, and in the Swiss context at the cantonal and communal level, legislation, regulation and the general politics of digitalization become ever more visible.

Public opinion regarding these issues is, for the time being, under-researched. A small, but emerging scholarship in political economy has investigated the political consequences of workplace digitalization. Workers in sectors vulnerable to automation are more in favour of redistribution (Thewissen and Rueda 2019). Moreover, in the US the threat of replacement by robots led to higher support for Donald Trump (Frey *et al.* 2018), while in Western Europe the "losers of automation" are more inclined to vote for the radical right (Im *et al.* 2019), but also for the mainstream left (Gingrich 2019). On the other hand, high-skilled workers who experience exposure to digitalization in the workplace show increased turnout levels, and higher support for the conservatives and incumbents (Gallego *et al.* 2018). However, there is a clear scarcity of studies that have investigated citizens' attitudes regarding specific issues that entail the digital society as such. A reason for this lack of knowledge may be the fact that for the moment, issues regarding digitalization have been of low salience in electoral contexts (König and Wenzelburger 2019). However, it is sound to assume that its salience is likely to increase in the near future, as a consequence of further digitalization processes.

[1] The Federal Chancellery currently lists two popular initiatives about 5G, and one about e-voting, in the stage of collecting signatures (https://www.bk.admin.ch/ch/d/pore/vi/vis_1_3_1_1.html

The same goes to a large extent for the political offer, and in particular in partisan terms. It is largely unknown how political parties deal with issues regarding the digital society, and which strategies they have used to position themselves on these issues. At the same time, governments have been confronted with the need to develop policies regarding these issues. One study to date has investigated political parties' inclusion of digitalization in their manifestos in eight Western European countries, excluding Switzerland. The findings show that especially parties with governing experience put a larger emphasis on digital policy in their programs (König and Wenzelburger 2019). However, regarding the *position-taking* on these issues, it is still unknown how political parties navigate this new policy and issue area. A relative exception is the Pirate Party movement, that is politically active in eleven European countries. The Pirate Party has put issues regarding the information society on the political agenda, mainly regarding digital and intellectual property rights, freedom of expression and information, and privacy (Jääsaari and Hildén 2015, Zulianello 2018). The electoral success of the party in German subnational elections has led to their competitors to also position themselves on these issues (Siewert and König 2019). Voters' motivations to support these parties are mainly political distrust and concerns over privacy (Otjes 2020). Also in Switzerland, the Pirate Party has been active since 2009, but has not obtained national representation – as in most countries where such parties are active, except for Luxembourg, Iceland, and the Czech Republic (Otjes 2020). However, the issues these parties raise do not cover many of the challenges regarding the governance of the digital society, as their goals mainly cover *individual* rights and freedom in the digital age – that have expanded to broader notions of culture, participation, and self-expression (Jääsaari and Hildén 2015).

Over the whole political party landscape, what can be observed, albeit in a still tentative way, is that attitudes towards the regulation of further digitalization do not follow traditional partisan divides. To the contrary, these issues *divide political parties within their organisations*. For instance, youth party organisations often take a stance on digitalization that is different from the positions taken by their mother parties. In some cases, this can lead to unexpected, "unholy" partisan alliances. The legislation on e-gambling, for example, voted upon by the Swiss electorate in June 2018, strongly divided political parties. The referendum committee opposing the law feared a limitation of online services and was composed of members of just about all parties, in particular the youth sections of parties, together covering the entire political spectrum (Fenazzi 2018). It is most likely that public opinion is equally scattered across traditional political divisions when it comes to regulation of online services, platforms and infrastructure. However, such divisions are very much under-researched, even though they have a strong likelihood of becoming ever more salient. Moreover, such political divisions may well be linked to existing gaps in "digital affectedness" among the electorate.

Digital inequality and the digital divide

The opportunities and challenges posed by digital transformation importantly depend on individuals' skills to navigate these new digital avenues, often referred to as digital skills. Digital skills and

competence refer to what individuals can actively do using new technologies, mainly but not exclusively the Internet (Hargittai 2010, Seufert 2017). The conceptualization of knowledge, competence, and skills regarding digital technologies is multidimensional (Helsper and Van Deursen 2015). Digital skills are conceptualized as a succession of operational skills (the ability to use hardware and software), information skills (formal and substantial), strategic skills (computer/network usage for a specific goal) (Van Dijk 2009), and creative and social skills (Van Deursen *et al.* 2016). While many empirical studies operationalize digital skills with measures of operational skills and usage access (usage time, type of application, and diversity of use), information skills and literacy, technical competencies, and strategic skills are crucial for individuals' adequate use of modern technology (Mossberger *et al.* 2003, Van Dijk 2009, pp. 294–295).

While the term 'digital divide' was initially coined to distinguish the 'haves' from the 'have-nots' regarding Internet access (Norris 2001), the second-level digital divide refers to differences in Internet use and gaps in digital skills (Hargittai 2002, Van Deursen and Van Dijk 2011). More recently, the third-level digital divide describes differences in the benefits that people obtain from Internet usage (Scheerder *et al.* 2017). The latter two are most relevant in the current digital age, as the access divide has greatly diminished in most advanced democracies. The digital skills divide is not simply a generational divide: also older adults show variation in digital skills (Hargittai and Dobransky 2017, Hofer *et al.* 2019) – just like 'digital natives' (Hargittai 2010, Correa 2016), who are also found to lack sufficient skills, even in a country with a strong educational system as Switzerland (Seufert 2017).

Digital skills are an important source of human capital, which provides viable labour market skills, and allows increased access to e-government information and services, and political information (Mossberger *et al.* 2003, Hargittai and Shafer 2006, European Commission 2019). Pre-existing inequalities by level of education, income, and gender are found to align with digital skills inequalities (Robinson *et al.* 2015, Seufert 2017, OECD 2018). As such, a vicious circle is created, in which existing offline inequalities are amplified by technology, and marginalized groups become further marginalized (Kvasny 2006, Van Deursen *et al.* 2017). The consequences of digital inequality thus impact citizens' position in society, as digital skills ultimately provide resources in terms of human, social, and cultural capital (Dimaggio *et al.* 2004, Van Dijk 2005, Helsper and Van Deursen 2015).

In the political context, digital skills inequalities are also found to align with, or even enhance gaps in political knowledge and online political participation. A multitude of studies have investigated the potential of the Internet and new digital technologies to (re)mobilize – particularly younger – voters into becoming (more) politically engaged, (Scheufele and Nisbet 2002, Quintelier and Vissers 2008, Bakker and de Vreese 2011, Bennett *et al.* 2011, Hargittai and Shaw 2013). While access to the Internet can bridge existing inequalities by socio-economic status (SES) (Morris and Morris 2013), most common conclusions are that online politics replicate existing offline participation and engagement patterns (Gibson and Cantijoch 2013). Therefore, the Internet has been identified as *"a weapon of the*

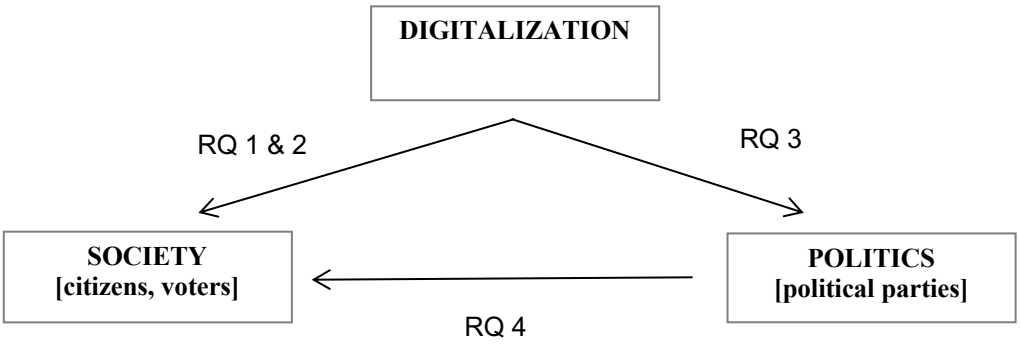
strong", as political inequality is replicated if not reinforced in the online context (Schlozman *et al.* 2010).

The current state of the art regarding digital skills and the digital divide has uncovered that this is an important source of inequality, that coincides with or even amplifies existing inequalities. However, what is currently unknown is whether we can speak of a salient division in society between individuals on either side of the digital divide. That implies that these groups do not only share the extent to which they are affected by digitalization, but also identify with their peers on the same side of the digital divide. This divide refers not only to the division between digitally skilled and digitally unskilled, but to more encompassing categories of digital affectedness, comprised of both subjective and objective conditions, skills, and attitudes. As such, the proposed project provides a theoretical typology of "winners" and "losers" of digitalization, and tests it empirically with a fine-grained sociological assessment of these two groups, and everyone in between. This is the first step in the contributions of this study, which are further outlined below.

Contributions of the proposed study

The vast changes in the last decades induced by digital transformation call for a systematic investigation of its social and political consequences. Can we observe a new line of conflict in society and politics between the winners and losers of digitalization? This study will firstly advance a theoretical framework rooted in cleavage theory, regarding the political relevance of this potential new conflict, which is then assessed empirically. It is argued that we may be witnessing the emergence of a new cleavage, for which some of the necessary conditions are present at both a conceptual and empirical level.

Figure 1. Core theoretical framework



It is currently largely unknown what the political implications of digitalization look like, including citizens' attitudes on such issues and how political actors deal with them, while they are increasingly put on the political agenda. Therefore, this study investigates both the demand- and supply-side of politics of this question, and the interaction between the two, after analysing to what extent a structural division in society can be observed. *Figure 1* summarizes the relation between the three core components of our theoretical framework, with its corresponding research questions:

RQ 1. To what extent does the objective and subjective impact of digitalization on citizens materialize into a structural divide between winners and losers of digitalization?
RQ 2. How does the potential new divide structure citizens' political attitudes, particularly attitudes on digitalization issues?
RQ 3. To what extent is the potential new divide articulated in partisan terms?
RQ 4. How does the political offer regarding digitalization affect the political behavior of citizens?

The answers to these questions will serve to determine to what extent we can speak of an emerging socio-political conflict, and whether it has the potential to develop into a new cleavage, with corresponding potential for party system change. In the detailed research plan (section 2.3), the theoretical expectations are developed further and more precisely.

2.2 Current state of own research

The applicant, Prof. Dr. Alexander H. Trechsel, currently holder of the chair in Political Science and Communication at the University of Lucerne, has a long-standing track record in political behavior and public opinion research, the field in which this project is mainly situated. Over the past 20 years, he has published extensively in this field, including the subfields of electronic democracy, Internet voting, and e-governance. As such, the applicant has extensive academic research and publishing experience in the subfields that this study brings together. Recent contributions involve the co-editorship of two volumes regarding political behavior and the Internet, the *Oxford Handbook of Electoral Persuasion* (Suhay *et al.* 2020) and *The Internet and Democracy in Global Perspective: Voters, Candidates, Parties, and Social Movements* (Grofman *et al.* 2014). As an expert of Swiss politics, Trechsel has authored and co-authored several monographs on direct democracy (Trechsel and Serdült 1999, Trechsel 2000) and the Swiss political system (Kriesi and Trechsel 2008), as well as book chapters and peer-reviewed journal articles in this field (Sciarini and Trechsel 1996, Trechsel and Kriesi 1996, Trechsel and Sciarini 1998, Barankay *et al.* 2003). In this context, he also published on political cleavages, which is directly relevant to the current project (Trechsel 1995, Hug and Trechsel 2002).

The applicant has been successful in raising funds to conduct a number of empirical research projects, collecting large-n survey data regarding public opinion, political behavior, and Internet voting in the cantons of Geneva (Auer and Trechsel 2004) and Zurich (Serdült and Trechsel 2006), as well as Estonia (Breuer and Trechsel 2006, Trechsel *et al.* 2007, Alvarez *et al.* 2009). Trechsel has also successfully coordinated several international research projects, most notably the EU Profiler project, a pan-European Voting Advice Application (VAA) for the European Parliamentary Elections of 2009, which has won the 2009 World E-Democracy Forum Award, and its sequels, euandi 2014 and euandi 2019. Each one of the three projects involved the collaboration of over one hundred researchers, from all over Europe, and its output has led to several peer reviewed journal articles (Alvarez *et al.* 2014,

Bright *et al.* 2016, Garzia, Trechsel, and De Angelis 2017, Garzia, Trechsel, and De Sio 2017, Pianzola *et al.* 2019). This project benefits of the applicant's experience with VAA development including the large-scale coding of political party manifestos, that are also implemented in the proposed design.

Currently, the applicant is conducting an SNSF-funded project entitled 'Media, Information consumptions, and politics' (MICaP, 2018-2021), which is still ongoing, and its results are expected to be published in 2021, after the data collection and analyses have been finalized. The project differs from the currently proposed study in various ways, including the subfields in which the two respective studies are situated. While MICaP is firmly rooted in political communication and political psychology, the proposed study departs from political sociology, and, more in particular, cleavage theory. While MICaP mainly studies the consequences of the changed media environment (media segregation) on voters' media consumption in relation to their attitude formation and political behavior, the proposed study investigates the consequences of digitalization from both the political supply- (political parties) and demand-side (citizens). As such, the media environment and citizens' media consumption are not part of the proposed study, while they are central to MICaP. The knowledge gained from the MICaP study are relevant and informative to the proposed project, which will lead to cross-fertilization between the two projects on a higher level of abstraction: both projects deal with different dimensions of the nexus between digitalization and politics. Next to MICaP, a short project is funded by the SNSF Spark scheme, entitled 'Algorithmic News Feed and Democracy', which investigates the impact of algorithmic personalized news feeds on democratic outcomes with a series of randomized controlled trials in the context of referendums. The project is situated in the same subfields as MICaP and starts in November 2020 and runs until October 2021.

The proposed study forms a synthesis of different parts of the applicant's contribution to the current state of research in the field, connecting the impact of technological advances – particularly digitalization – to cleavage theory and the study of public opinion and political behavior.

2.3 Detailed research plan

This research studies the socio-political consequences of digitalization, focusing on the political supply- and demand-side. While it is clear that digital skills are increasingly important to navigate numerous avenues in society and coincide with existing inequalities, it is currently unknown whether the digital divide has the potential to materialize in a socio-political structural conflict between winners and losers of digitalization. Moreover, a systematic analysis of how political parties and their MPs deal with issues regarding digitalization and the governance of the digital society, is also missing from the state of the art. However, since these issues are increasingly put on the political agenda, it is important to investigate whether and to what extent contemporary partisan politics are prepared for the likely increase, both in numbers and salience, of such issues. In case the potential for a conflict between winners and losers of digitalization is indeed identified among the electorate, this leaves room for mobilization and

representation by (new) parties along this new dividing line. Traditional partisan alignments, on the other hand, are likely to cut across this new divide.

This study takes a mixed methods approach, applying qualitative and quantitative methods to study both voters and political actors. To study the political demand-side, focus groups and an original survey, including an experimental design are conducted. Parliamentary proceedings, roll-call votes and political party manifestos are analysed to investigate the political supply-side. This mixed-method strategy answers the call of recent contributions for the application of such designs in order to allow for better inferences to address controversies in the current state of the art (Garzia, Trechsel, and De Angelis 2017, Cantijoch and Gibson 2019).

Theoretical framework

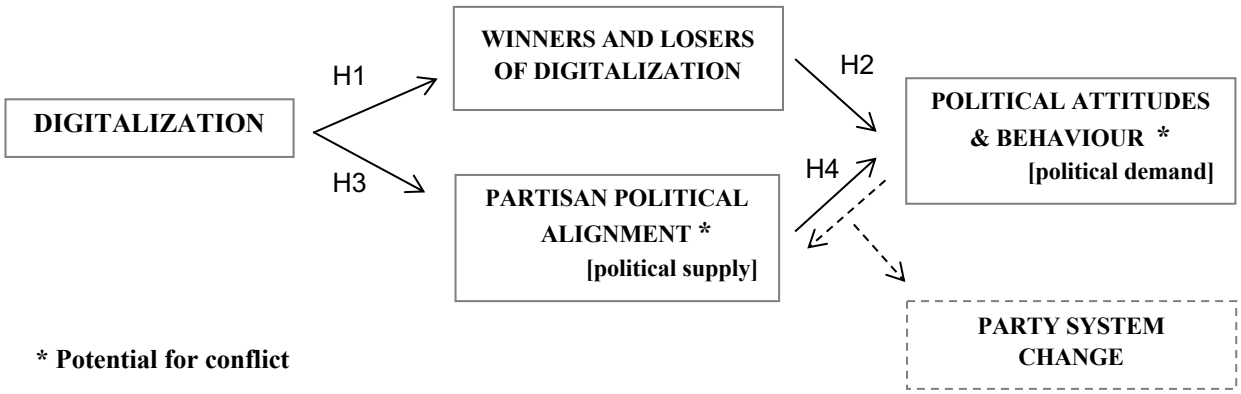
This study investigates the socio-political consequences of digitalization. The starting point of this study is that while digitalization profoundly impacts society – including the labour market, organizational structures and institutions, and individuals' lives – and it is clear that there are large differences in how people respond to and are affected by digitalization, little is known about its socio-political consequences, both in terms of the political demand and supply side. The impact of digitalization on society, however, affects individuals in their social and economic realities. The literature previously discussed has shown that the digital divide coincides with, if not amplifies, existing inequalities in society, and that while digitalization impacts both sides of the economy, not all sectors and professions are equally impacted. While some benefit from digitalization, others are threatened by it. As such, this study departs from the premise that the differential impact of digitalization on different groups in society provides potential for conflict. This conflict potential, if fully materialising, could imply a disruption of democracy and party systems as we know them, through new partisan alignments and corresponding patterns of public opinion.

This study advances a novel theoretical contribution regarding a new political conflict between winners and losers of digitalization, with the potential to develop into a cleavage, and the potential to invoke party system change. Empirically, it investigates at the micro level to what extent we can observe a divide between the so-called winners and losers of digitalization, constituted by two dimensions, respectively referring to the objective and subjective impact of digitalization, related to the digital skills gap and a set of objective and subjective conditions, skills and attitudes (RQ1). This part of the study provides a fine-grained sociological assessment of the potential winners and losers of globalization, resulting in a typology with these two groups at the extremes. Then, we ask how this potential conflict is politically relevant, by studying the potential for political conflict between these two groups in society (RQ2); and to what extent the potential new divide is articulated in partisan terms (RQ3). Lastly, we investigate how citizens react to the political offer regarding digitalization (RQ4). These insights will help us understand to what extent a new socio-political conflict caused by the digital revolution is emerging, in terms of political attitudes and behaviour, leading to altered patterns of electoral alignment

on new policy issues along this new dividing line. Also, we strive for a better understanding of whether and how political parties cater to these developments, and how the electorate responds to it. Ultimately, this allows us to assess whether and to what extent these developments may lead to party system change.

In doing so, the study contributes not only to a strengthened grasp of the digital divide in society, but links this to a deeper understanding of potential socio-political structural consequences of the digital revolution and digital inequality. The theoretical model upon which the study is based with corresponding hypotheses, is depicted in *Figure 2*. In the remainder of this section, the theoretical foundations and corresponding hypotheses are elaborated. At the end of the section, *Figure 3* summarizes the hypotheses and relevant concepts.

Figure 2. Theoretical model



The theoretical foundation of the study is rooted in the concept of "winners" and "losers" of digitalization, that provides the basis for the development of a cleavage theory regarding the potential conflict between these two groups. When a structural conflict is identified between groups in society, this materializes in a political conflict where political parties and their electorates align along these lines. In their seminal work, Lipset and Rokkan (1967) demonstrate how different revolutions over the course of time have resulted in several structural cleavages. We argue that the digital revolution has the potential to result in a structural cleavage between winners and losers of digitalization, but that we are not yet at the stage of a conceptually delineated cleavage. However, the division line between the digital have- and have-nots becomes ever more visible in modern, liberal societies. For the time being, individuals belonging to either group are still scattered across society in an unstructured way. The same goes for digitalization pushers and those holding back within political parties. At the moment, we may already observe the potential of a political conflict materializing in processes of democratic decision-making and at the polls, where groups of voters and/or factions within parties clash with each other.

Recently, a new structural conflict has been identified between the winners and losers of globalization (Kriesi *et al.* 2008). Although the digital revolution has consequences for globalization and vice versa, we argue that the process of digitalization can be conceptually distinguished from globalization. For instance, international trade in vehicles, raw materials, energy, Europeanization, and

dismantling of trade barriers are among the many examples of globalization not caused by digitalization. Political conflicts closely related to the digital revolution have already occurred, regarding the regulation of intermediaries or platforms such as Uber, AirBnB, Facebook, Google Streetview, 4G and 5G infrastructure, to name a few. The need for regulation is only increasing, and these issues blur traditional lines of political conflict. Voting in parliaments on these issues is often unpredictable as winners and losers of digitalization are present within all parties – and their respective electorates.

It might be simply a question of time until such a conflict becomes politically structured. We argue that the level of digital skills an individual possesses is a co-determinant of their belonging to the potential "losers" or "winners" of digitalization. It is sound to assume that individuals surfing the digital wave more elegantly are also those profiting from the wave in the first place. Likewise, a loser of digitalization is also less likely to dispose of highly developed digital skills. In the current Covid-19 crisis, such lines of conflict become highly visible, with digitally skilled individuals being more likely than their counterparts to manage the constraints of the lock-down in terms of, for instance, working from home through digital tools. The losers of digitalization are particularly vulnerable to such a massive exogenous shock to society – but they are also more vulnerable to societal developments towards higher levels of digitalization, *tout court*. The resulting typology of the two opposing extremes that constitute the societal base of the cleavage, is identified by a set of three objective conditions: 1) the extent to which one benefits respectively loses from digitalization, in terms of economic and/or labour market position; 2) level of digital skills; and 3) attitudes towards digitalization.

One can only speak of a cleavage in case three conditions are fulfilled: a pattern of social-structural differences between the opposing groups, the respective identification with these groups by its members, and an organizational or political expression and mobilization of this conflict (Bartolini and Mair 1990). Regarding the demand-side, this implies that the respective winners and losers of digitalization also need to identify as such, adding a *subjective* manifestation of the conflict to the previously identified objective conditions and attitudes of what constitutes belonging to either sides of the digital divide. In other words, in order for this to develop into a cleavage, individuals need to *identify* with being on one or the other side of the digital divide, next to the objective conditions specified earlier. Taken together, we expect that *the objective and subjective dimensions of the consequences of digitalization importantly overlap, constituting a mutually reinforcing structural divide between winners and losers of digitalization* (H1), that provides fertile breeding ground for a nascent political conflict.

Social divisions are shaped by their political articulation (Kriesi 2010), and without organization of the respective group interests and the subsequent mobilization by political actors along the line of division, one cannot speak of a cleavage (Bartolini and Mair 1990). With regard to digitalization, it becomes ever clearer that attempts regulating the latter do, indeed, politically divide the electorate. However, a collective identity formation process among both losers and winners of digitalization is, at best, in its very early stages. Therefore, the partisan mobilization of these groups is

not yet systematic. Arguably, however, citizens' political attitudes towards digitalization issues differ, do become visible and thus constitute a first building block towards the development of a cleavage. Building further on the hypothesized structural divide between the winners and losers of digitalization, we therefore hypothesize that *we can clearly distinguish a measurable line of conflict between winners and losers of digitalization within the electorate, when it comes to alignments of their attitudes on policy issues regarding the digital society* (H2).

The potential new conflict between these two opposing groups can be expected to be articulated by a new dimension in the political sphere, that is different from existing dimensions. Currently, Western European party systems are mainly structured by a socioeconomic dimension, articulating the socio-economic class cleavage in society; and a socio-cultural dimension, articulating the more recent cleavage between the winners and losers of globalization (Kriesi *et al.* 2006, Van der Brug and Van Spanje 2009). As of now, national-level election campaigns have been shaped by political issues that relate to either of these two dimensions, such as economic redistribution, immigration and integration, EU relations, and environmental policy. Issues regarding digitalization and the governance of the digital society thus do not constitute the main locus of political conflict. However, policy makers and governments are increasingly confronted with the need to design policies and regulation in this domain. The pressure on political parties to take a position on digitalization issues has also increased in recent years Therefore, this study asks how political actors have dealt with these issues. To what extent is the potential new divide between winners and losers of digitalization articulated in partisan terms? (RQ3)

As these issues find their way more and more frequently onto the political agenda, parties and other political actors may have become more systematic in their dealing with these issues We expect that digitalization challenges traditional partisan positions both within, and between parties. First, regarding *inter*-party divisions, it is expected that for now, defenders of the winners respectively the losers of digitalization are found across the whole political spectrum, from the (socio-economic and socio-cultural) left to the right, because digitalization issues do not align with the existing dimensions of political conflict. As such, *contemporary relevant political dimensions are not expected to structure the party competition regarding digitalization issues* (H3a). Second, we also expect issues regarding the digital society to have started to divide parties internally. As discussed previously, youth organizations of Swiss political parties have taken different positions than their mother parties (Fenazzi 2018), indicating how digitalization issues can lead to internal divisions. The same is true for MPs of the same party. In fact, one could argue that this leads to a generally heightened unpredictability of positions taken within political parties. This is expected to occur more generally, as many parties struggle to take positions in this policy domain, and some of them are internally challenged to the point to even refraining from taking a unified stance (König and Wenzelburger 2019). Therefore, *intra-party divisions are expected to be even more prominent than inter-party divisions regarding digitalization issues* (H3b). However, if and when structural realignment at the partisan level will start to occur, there may be potential for party system change.

These expectations regarding the political supply-side (political parties), have implications for the political demand-side (voters). Voters react to the political offer of political parties and make their choice in elections and popular votes accordingly. For sure, the inverse does occur, too, with parties aligning their platforms to shifts in public opinion. Even if, as expected in H2, the potential conflict between winners and losers of digitalization is found to be politically relevant among voters, this is for the moment not politicized by political parties. However, once parties start to take clearer positions on digitalization issues, voters can be generally expected to take note of this altered offer – provided that these issues are considered relevant for their political choice. Following this reasoning, it is expected that *increased visibility of political party positions on digitalization issues leads to voters' realignment of partisan preferences along the new line of conflict between winners and losers of digitalization* (H4).

Figure 3. Overview of hypotheses and relevant concepts

H1. The objective and subjective dimensions of the consequences of digitalization constitute a structural divide between winners and losers of digitalization.

H2. Winners and losers of digitalization show corresponding alignment of attitudes on digitalization issues.

H3a. Current dimensions of political conflict do not structure party competition regarding digitalization issues.
H3b. Intra-party divisions are more relevant than inter-party divisions regarding digitalization issues.

H4. Increased visibility of political parties' positions on digitalization issues leads to voter realignment of partisan preferences along the new line of conflict.

CONCEPTS H1

Objective	Subjective
Economic position	Perceived threat of digitalization
Digital skills	Insecurities digital skills
Willingness to adapt	Fears digital society
Attitudes digitalization	Collective identities

Research Design

Next to advancing a novel theoretical contribution to cleavage theory, this project provides a possibility to collect high quality data that is currently missing from the state of the art. The data will stem exclusively from the Swiss case. There are several, both substantive and practical reasons for this choice. Substantively, Switzerland offers one of the most advanced contexts in terms of digitalization. Regulating digital innovations, but also privacy, data protection and digital security have a longstanding tradition. Also, direct democratic votes at all levels of the federal state offer, on a continuous basis, loci for measuring the coming together of party positions, public opinion and political behaviour. Also, the relatively high number of effective political parties, the numerous cleavages cross-cutting Swiss society, that, together with federalism lead to high fractionalization provide a most fertile ground for detecting initial germs of the theorized developments. In this sense, Switzerland offers a perfect context to conduct this both theoretically and empirically novel, and with respect to different dimensions exploratory and theory-building study. Practically, our privileged access to high-quality data and our

broad experience with the Swiss context will be most welcome, and even indispensable for navigating these uncharted waters at the intersection of digitalization and politics. Going comparative would, of course, be a most welcome next step – but at this stage of developments we prefer to remain focused on a single case (with variation at the subnational level, however). Our empirical strategy is therefore rather conservative, in order to as finely as possible operationalize and measure the concepts we propose. This approach will lead we hope, to internally most valid results, at the expense of suffering from external validity beyond Switzerland. However, the theoretical innovations can be easily adapted to a comparative strategy and will thus contribute to extending our empirical framework in the future to arguably harder cases.

The project relies on a mixed-method strategy that involves the collection of original two-wave survey data (including an experimental component with a voting advice application), conducting focus groups, and analysing cantonal and federal parliamentary proceedings, roll-call votes, and political party programs. For the demand-side of the project, the population of the citizens under study is formed by Swiss citizens aged 18 and over (eligible to vote). The different components of the research design are summarized in *Table 1* and outlined in more detail in the remainder of this section.

Table 1. Summary of research design

	Analytic strategy/main variables	*Hypothesis*	*Political side*
Focus groups	Preferences, experiences, and attitudes about digital transformation, digital skills requirements, and their relation to political attitudes and behaviour.	H1	Demand
Original survey	Subjective and objective dimensions of consequences of digitalization, in relation to political attitudes and stances on digitalization issues [wave 1]	H1,2	Demand
Survey experiment (VAA)	Voting behavior in relation to increased visibility of digitalization issues [wave 2]	H4	Demand
Party manifestos	Political parties' emphasis and positions on digitalization issues.	H3a	Supply
Parliamentary proceedings and roll call votes	Political actors' (by political party) stances on and voting behavior regarding digitalization issues.	H3b	Supply

Focus groups

Four focus groups (comprised of eight to ten individuals) are held with individuals of different gender and age groups, before the implementation of the survey. Two focus groups are held in an urban area, and two in a rural area. The main goal of the focus groups is to obtain more in-depth insights regarding citizens' experiences with digital transformation, attitudes towards digital skills requirements, and their relation to political attitudes and behavior. The purpose is to inform the data collection of the survey, as the outcomes of the focus group discussion can help to inform the design of the survey and further

specify the hypotheses. Participants are recruited through a research company and are compensated for their time. The interaction between participants is particularly interesting regarding their attitudes on digital skills requirements by different levels of self-perceived digital skills, and their political attitudes. The proceedings of the focus groups are audio-recorded and transcribed by research assistants.

Original 2-wave survey with an embedded VAA experiment

In order to test the hypotheses regarding voters, original survey data is collected among Swiss citizens. A Lucerne-based research company (see attached quote) will conduct the sampling and administer the survey. The random sampling strategy relies on the usage of the Federal Statistics Office's sampling frame that includes data from cantonal and municipal population registers.[2] Respondents are invited to participate in the survey with a letter through postal mail. The first survey wave includes questions regarding the following topics and concepts (next to a battery of socio-demographics): occupation and sector of employment, party preferences, political ideology, and positions on traditional and digitalization policy issues. Moreover, indicators included in the survey referring to the objective and subjective dimensions of the consequences of digitalization are the following: digital skills, attitudes towards digitalization, willingness to adapt; respectively fears/insecurities towards digital society, perceived threats of digitalization, identification with either side of the digital divide. Digital skills are measured using a well-established battery of survey questions (Hargittai 2005), complemented with measures from a recent proposal for a unified framework of digital literacy in political science (Guess and Munger 2020). The data collected in the first wave allows to test hypotheses 1 and 2, regarding the identification of a structural divide between winners and losers of digitalization, and alignment of citizen's attitudes on digitalization issues along this divide.

Moreover, a survey experiment is included in the design to test H4, regarding the effect of increased visibility of parties' offer regarding digitalization on the realignment of party preferences. The Swiss federal elections held in October 2023 will serve as a case in point to investigate this expectation. We expect that winners respectively losers of digitalization react to the partisan offer and cast their vote accordingly. In order to test this expectation, we experimentally increase the visibility of digitalization issues by asking respondents to make use of a voting advice application (VAA) that is designed for the purpose of this study. VAAs are online tools that help users to cast their vote by comparing their preferences on policy issues with political parties' stances on these issues. Respondents fill in their positions on a range of policy statements, after which the user's profile is compared with that of the political parties, resulting in the "voting advice" – showing the user which parties overlap most with their policy preferences (Garzia, Trechsel, and De Angelis 2017). These tools have become increasingly popular in the past decade (Garzia and Marschall 2019, Trechsel and Garzia 2020),

[2] The BSF needs to approve the usage of this sampling framework (SRPH), which is available for academic research purposes. In case this approval is not obtained, we rely on the AZ Direct address base. In the first wave, 10.000 addresses are sampled with the goal of reaching a total n of 2000 for the second wave of the survey.

including the Swiss VAA Smartvote (Ladner 2016). The VAA designed for the purpose of this study follows the same technique applied in previous VAA-projects the applicant was involved in (Reiljan *et al.* 2020). As such, the party positions implemented in the VAA are derived from the coding of party manifestos (see next section for the coding procedure), parties' self-placement (parties are invited to position themselves on the selected policy statements), and media coverage during the election campaign (Trechsel and Mair 2011).

To a large extent, the administration of the VAA in the survey experiment will follow the logic of the survey experiment led by Pianzola et al. (2019), using the following procedure. Respondents are randomly distributed over four different groups. The control group does not receive an invitation to the completion of the VAA, while three treatment groups receive respective different versions of the VAA. 1) Respondents are asked their position on a battery of salient policy issues, regarding the socio-economic and socio-cultural dimension in politics, after which the overlap with political parties is shown (treatment group 1 "regular VAA"). 2) The second version of the VAA includes a battery of digitalization issues is included next to the "traditional" issues (treatment group 2 "regular + digitalization VAA"). 3) The third version of the VAA consist only of the latter battery of digitalization issues (treatment group 3 "digitalization VAA"). The issue positions that respondents provide by taking the VAA are included in the survey dataset. Respondents are asked their propensities to vote (PTVs) for each of the political parties competing in the election in both waves of the survey.

The first survey wave is fielded before the 2023 Swiss federal elections. The second survey wave is fielded shortly after the elections, which asks respondents about their turnout and vote choice, as well as their PTVs, again. The analysis of the experimental survey data is a direct test of H4. As we expect political realignment to occur as a consequence of an increased visibility of parties' positions on digitalization issues, for treatment group 2 and particularly treatment group 3 we expect their pre-treatment PTVs (wave 1) to be less in line with their vote choice in the election and their post-election PTVs (wave 2), due to the exposure to parties' positions on digitalization. In these two treatment groups we expect more coherence between their digitalization issue attitudes and party choice and PTVs than for the other groups. Respondents who find out that their initially preferred party is not in line with their preferences and interests regarding digitalization, may switch to a different party, or display altered PTVs respectively, as a consequence of exposure to the party's positions on digitalization.

The VAA will need to be programmed for the purpose of the study and will only be available to the treated individuals in order to avoid potential contamination beyond the treatment groups. For this, we rely on the freely available code of "societly", a fully-fledged, multi-lingual voting advice application which was recently adapted to the European Parliament Elections of 2019 by a team of researchers co-led by the applicant. The same will be done for the 2023 Swiss federal elections survey experiment proposed in this study.

Analysis of political party manifestos, parliamentary proceedings and roll-call votes

Political party manifestos for the 2015, 2019, and 2023 Swiss federal elections are coded to map parties' stances and position-taking on issues related to digitalization. This analysis complements previous comparative work regarding the question which political parties place emphasis on digitization issues by taking it up in their manifestos (König and Wenzelburger 2019), and goes beyond that by mapping not only which parties emphasize it, but also the positions they take in this debate – and on the potential new line of conflict. The coding is performed by trained research assistants, by making use of core sentence analysis (Kleinnijenhuis and Pennings 2001), previously used in studies of political conflict in Europe (Kriesi *et al.* 2008, 2012). This inductive coding procedure is particularly suited in this case due to the study of an emerging field of political policy and political positioning. Rather than making use of a predefined list of issues on which parties' stances are coded, new issues can be added during the coding procedure. The outcome of the coding procedure is a quantitative dataset containing all issues regarding digitalization put forward in Swiss party manifestos since 2015, and political parties' position-taking on these issues. The outcomes of the analysis of this dataset will provide insights regarding the emphasis that parties place on digitalization issues, the position they take on these issues, and how this has evolved over three election years. It will provide a direct test of H3a to map parties' position-taking on these issues across the political spectrum. Moreover, the outcomes of this data collection and analysis serve as the input for the VAAs used as the treatment in the survey experiment.

To test H3b, information is needed regarding political actors' positioning on and dealing with digitalization issues, to identify differences therein *within* political parties. To this end, databases of discourses in cantonal and federal parliaments are analyzed (from 2010 onwards), and roll-call votes in the Lower Chamber of the Federal Parliament (National Council). Parlament.ch and Curiavista provide databases of all roll-call votes from the National Council, and all parliamentary proceedings on the federal level, indexed by topics and keywords. A collaboration with Polsan AG (a policy analysis and consultancy agency), co-developer of the POLITmonitor, allows the project team to analyse this database regarding all relevant bills and motions in cantonal parliaments (see attached letter of intent). In a first step, all relevant issues and database entries are identified by making use of the databases' topics and keywords, complemented with a list of relevant keywords that the project team will develop. After identification of all relevant issues and keywords, the final text corpus is obtained. It is analyzed by making use of the most recent developments in quantitative text analysis in political science over the last years (Wilkerson and Casas 2017). The main goal is to analyze the proceedings, bills, motions, parliamentary questions and roll-call votes, by categorizing the relevant actors *within* political parties by their position regarding digitalization, either pro or con, to provide a test of H3b. Moreover, it will provide insights regarding the development of the political debate regarding digitalization.

2.4 Schedule and milestones

The applicant (principal investigator, PI) leads the project and develops the main theoretical foundations, while two experienced post-doctoral researchers will assist the PI in the implementation of the data collection and analysis and co-author the journal articles. Post-doc 1 is the overall co-coordinator of the project and is responsible for the implementation and analysis of the focus groups, the survey implementation, and the manifesto data. Post-doc 2 co-coordinates the big data and text analysis (roll-call votes, parliamentary proceedings) and the VAA development and implementation (including the media analysis and parties' self-placement). Post-docs are preferred over doctoral students, due to the complex four-fold empirical strategy that requires scientific collaborators with hands-on experience in conducting and coordinating such studies. Research assistance is hired for survey translation, coding political party manifestos, transcribing the focus groups, collaborating in collecting the text corpus, and for the VAA development (e.g. testing, imputing party positions). External resources are used for fielding the survey and recruitment for and implementation of the focus groups and the technical implementation of the VAAs (see attached quotes). *Table 2* describes the schedule of the project, in relation to the work packages and the planned output.

Table 2. Project timeline

Year	*Project stage*	*Research phase/task*	*Milestones*	*WP*	*Actors*
Oct. 2021-	Theory-building	Socio-political consequences of digitalization: a new cleavage?	M1: Theoretical model	WP 1	PI
Sep. 2022	Data collection & analysis	Focus groups I	M2: Focus group data	WP 1,2	PI, post-doc 1
		Analysis of party manifestos (2015, 2019)	M3: Article 1	WP 1,2	PI, post-doc 1
			M4: Manifesto data I	WP 3	PI, post-doc 1
Oct. 2022-	Data collection & analysis	Analysis of parliamentary proceedings & roll-call votes	M5: Pol. Debate data	WP 3	PI, post-doc 2
Sep. 2023		Analysis of party manifestos (2023)	M6: Manifesto data II	WP 3	PI, post-doc 1
		Survey design		WP 2,4	PI, post-doc 1
		VAAs development (incl. party-self positioning & media analysis	M7: VAA	WP 5	PI, post-doc 2
	Dissemination	International 2- day workshop		WP 1-3	PI, post-doc 1, 2
Oct. 2023-	Data collection & analysis	Joint political debate and manifesto data analysis	M8: Article 2	WP 3	PI, post-doc 2
Sep. 2024		Survey wave I & II	M9: Survey data	WP 2,4	PI, post-doc 1
			M10: Article 3	WP 2	PI, post-doc 1
Oct. 2024-	Data analysis	Publication of findings	M11: Monograph	WP 1-4	PI
			M12: Article 4	WP 4	PI, post-doc 1, 2
Sep. 2025	Dissemination	Dissemination conference		WP 1-4	PI, post-doc 1, 2
		Data archiving	M13: Publication data	WP 2-5	PI, post-doc 1, 2

Several work packages are identified in the study, respectively relating to the theory-building part of the study, and the different empirical components:

- WP 1. **Theory-building** regarding the winners and losers of digitalization.
- WP 2. **RQ 1 and 2**, focus groups and survey**.**

- WP 3. **RQ 3**, analysis of party manifestos, parliamentary proceedings and roll-call votes**.**
- WP 4. **RQ 4,** implementation of survey experiment.
- WP 5. **VAAs** development.

The planned project output consists of the following publications, that are also taken up in *Table 2*:
Article 1 – RQ 1, theory and focus groups
Article 2 – RQ 3, political debate and manifesto data
Article 3 – RQ 1&2, survey data
Article 4 – RQ 4, survey data
Monograph – RQ 1-4 and theory-building

2.5 Relevance and impact

The proposed project will lead to a number of important insights regarding the socio-political consequences of digitalization, which are clearly under-researched.

From an academic point of view, the study makes the following contributions. First, the study makes a theoretical contribution to the subfields of comparative politics and political sociology by proposing a further development of cleavage theory regarding the winners and losers of digitalization. This theory-building part of the study connects classic cleavage theory from political science with the political sociology of the digital divide, advancing the current state of the art. Second, the study provides new insights regarding the digital divide in society, and whether we can speak of a social conflict in this respect, advancing a novel typology and testing it empirically. Our study will identify more precisely than previous studies (and specifically in the Swiss context) the distribution and levels of citizens' digital skills, and which groups are specifically affected by digitalization. Furthermore, it will make use of newly developed indicators of subjective and objective dimensions of the individual consequences of digitalization. Third, by investigating to what extent the potential conflict between winners and losers of digitalization materializes politically, and by mapping the Swiss political debate regarding the digital society, the study provides important insights regarding an understudied policy and issue domain, that is likely to become increasingly relevant. It is currently unknown how political parties deal with digitalization issues, and how citizens think about them, but with these issues becoming ever more salient, so is their politicization. By understanding how and to what extent this issue domain becomes embedded in the political sphere, and how citizens and political parties position themselves on these issues, this study will investigate the political potential of this issue. No studies to date have done so in the Swiss context, while the country is increasingly faced with political initiatives – both from above and from below - regarding digitalization. Finally, by studying in an experimental setting how voters react to the offer of political parties, the study is able to show how the increased visibility of parties' positioning on digitalization and may lead to altered party preferences and, potentially, behaviour. These insights studying the political demand- and supply-side in direct relation to each other bring the

different components of the project together, and inform to assessing to what extent the hypothesized divide between winners and losers of digitalization may develop into a cleavage, with corresponding potential for party system change.

The broader impact of the study mainly relates to two components of the study. Firstly, by studying individuals' digital skills and related experiences and attitudes, this project can identify current societal challenges regarding digitalization and the demands it places on citizens. While most often the digital divide is interpreted as a generational divide, previous studies have shown that it is not that simple. Digital inequalities are multidimensional and often widen existing inequality gaps. The insights of this study will a provide fine-grained assessment of digital equality, that can inform policy and strategies to tackle it. Secondly, studying the impact of digitalization on the political demand- and supply side is important both for citizens and political parties because these issues impact citizens in their social and economic realities on a daily basis. This project can help to inform the public about parties' position-taking on these issues, to what extent this matches public opinion, and whether there is a mismatch in terms of citizens' demand and the political supply. For political actors, the project is relevant because it will identify the potential for (new) political parties to politicize the potential new conflict. These insights can help to strengthen democratic representation regarding a topic that has profoundly impacted society in the last decades – and will arguably continue to further do so.

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Curriculum Vitae

Prof. Dr. Alexander H. Trechsel, University of Lucerne, Switzerland (October 2020)

1. Personal information

Name: Alexander H. Trechsel
Date and place of birth: 6 February 1971 in Bern (Switzerland)
Citizenship: Swiss

2. Education

2015	**Habilitation** as full (ordinary) professor in Italy
1999	**Ph.D. in Political Science** (with highest distinction), University of Geneva, Switzerland
1994	**M.A. in Political Science**, University of Geneva, Switzerland
1992	**B.A. in Political Science**, University of Geneva, Switzerland

3. Academic Career

2016 –	**Full Professor of Political Science** Faculty of Humanities and Social Sciences, University of Lucerne
2015 –	**Faculty Associate** Berkman Center for Internet and Society, Harvard University
2005 – 16	**Full Professor of Political Science** Department of Political and Social Sciences, European University Institute
2012 – 15	**Faculty Fellow** Berkman Center for Internet and Society, Harvard University
2002 – 03	**Part-time Professor of Political Science** Department of Political and Social Sciences, European University Institute
2002 – 03	***Chargé de cours suppléant*** Department of Political Science, University of Geneva
2001	***Professeur remplaçant de science politi*****que (part-time Professor of Political Science)** Institute of Political Science and International Relations, University of Lausanne
2001 – 05	**Adjunct Professor of Political Science** **Kent State University Geneva-Programme, Kent State University**
2000 – 05	***Maître-assistant*** Research and Documentation Center for Direct Democracy (c2d), University of Geneva
1999 – 2000	**Visiting fellow** (fellowship by the Swiss National Science Foundation) European University Institute
1999	***Maître-assistant*** Research and Documentation Center for Direct Democracy (c2d), University of Geneva
1993 – 99	**Research Assistant** Research and Documentation Center for Direct Democracy (c2d), University of Geneva

4. Institutional responsibilities

2017 –	**Vice Rector for Research** University of Lucerne
2016 –	**Official Representative of the University of Lucerne** European Consortium for Political Research
2013 –	Member of the International Scientific Board of the ***Italian Political Science Review / IPSR (former RISP)***
2012 –	Member of the Editorial Board of the ***Journal of Election Technology and Systems / JETS***
2008 –	**Co-director of the book series** "Politik und Demokratie in den kleineren Ländern Europas – Politics and Governance in the Smaller European Democracies, Nomos
2007 –	Member of the Editorial Board of the ***Journal of Information Technology and Poltics / JITP***
2009 –16	**Founder & Director of the European Union Democracy Observatory (EUDO)** European University Institute, Florence (Italy)
2013 – 16	**Head of the Department of Political and Social Sciences** European University Institute, Florence (Italy)
2010 – 16	**Official Representative of the European University Institute** European Consortium for Political Research
1999 – 05	**Vice-director** Research and Documentation Center for Direct Democracy (c2d), University of Geneva

5. Research Grants

- Grant from the Swiss National Science Foundation (Spark scheme) for the research project "Algorithmic News Feed and Democracy" (2020-2021).
- Grant from the Swiss National Science Foundation for the research project "Media, Information Consumption and Politics (MICaP)" (2018-2021).
- Grant from the UNDP for the research project "Participatory Democracy" (2013-2014).
- Grant as Co-Investigator from the European Commission FP7 Programme for the research project "Puzzled by Policy" (2010-2013).
- Grant as Co-Investigator from the Fundação Francisco Manuel dos Santos, Portugal, for the research project "Small States in Europe – a Comparative Perspective" (2011-2014).
- Grant from the Jean Monnet Programme for the research project "Elections in Times of Crisis" (2011-2012).
- Grant from the Jean Monnet Programme for the research project "The Euro-crisis and Democracy in the EU" (2011-2012).
- Grant as Co-Investigator (leader) from the EUI Research Council for the project "EU Democracy Observatory 2010" (2010).
- Grant as Co-Investigator from the S&D Group in the European Parliament for the research project "The Effects of the Lisbon Treaty on the EP" (2010).
- Grant from the European Economic and Social Committee for the research project "EU Member States Consultations with Civil Society on European Policy Matters" (2010).
- Grant from the Council of Europe for the research project "E-voting in Estonia: EP Elections 2009 and Local Elections 2009" (2009).
- Grant as Co-Investigator (leader) from the EUI Research Council for the research project "EU Democracy Observatory 2009" (2009).
- Grant from the EUI/RSCAS, Kieskompas, NCCR Zürich for the research project "EU Profiler" (2008-2009).
- Grant as Co-Investigator from the Swiss National Science Foundation for the research project "Smart-voting as a Tool for Electronic Campaigning" (2005-2009).
- Grant as Co-Investigator from the European Commission FP6 Programme for the research project "Enabling Citizen's Initiative to eParticipation" (2007-2008), Co-investigator.
- Grant from the Council of Europe for the research project "E-voting in the Estonian National Elections 2007" (2007).
- Grant as Co-Investigator (leader) from the EUI Research Council for the research project "Ombudsman Studies: An Interdisciplinary Study of Multilevel Accountability and Political Effectiveness" (2007).
- Grant from the EUI Research Council for the research project "Patterns of e-Democracy in Advanced Industrial Societies" (2006).
- Grant as Co-Investigator from the Swiss National Science Foundation for the research project "Le juge Suisse et la démocratie directe" (2003-2006).
- Grant from the Council of Europe for the research project "E-voting in the Estonian Local Elections 2005" (2005).
- Grant as Co-Investigator (leader) from the Council of Europe for the research project "The Future of Democracy in Europe" (2003-2004).
- Grant as Co-Investigator (leader) from the European Parliament for the research project "E-democracy in Europe" (2003-2004).
- Grant as Co-Investigator (leader) from the European Commission's FP5 Programme for the research project on "Internet Voting and European Parliamentary Elections" (2002).
- Grant from the Swiss National Science Foundation for the research project "Institutional Attachment and the Shaping of Attitudes Towards Europe" (2000-2002).
- Postdoctoral fellowship at the European University Institute, Florence, Italy, offered by the Swiss National Science Foundation (1999-2000).

6. Supervision

Extensive supervision experience at the graduate level (supervisor and co-supervisor of 34 PhD-researchers at the European University Institute and at the University of Lucerne. 31 of them have so far successfully defended their theses at the European University Institute and at the University of Lucerne.

7. Teaching

Extensive teaching experience at all University levels at the University of Lucerne, Geneva, Lausanne, the European University Institute, Kent State University; invited lectures in classes at the University of Siena, University Pompeu Fabra Barcelona, University Carlos III Madrid, LUISS Rome, Scuola Superiore Sant'Anna Pisa, University of Tartu, National University of Kaohsiung, University of Edinburgh, University of Aberdeen, MGIMO Moscow, California Institute of Technology, University of Bergen.

Major Scientific achievements (last five years)

Publications

- Alexander H. Trechsel has widely published in peer-reviewed journals and books over the past five yearsSome of this research output was published in top journals, such the *Journal of Politics*, *European Union Politics*, *European Journal of Political Research*, *Party Politics*, *West European Politics* or the *Journal of Information Technology & Politics*. He is the author of several books and co-editor, together with Bernard Grofman and Elizabeth Suhay, of the recently published *Oxford Handbook on Electoral Persuasion* (OUP).

Supervision

Alexander H. Trechsel successfully supervised or co-supervised 31 PhD students who defended their doctoral theses at the European University Institute since 2009. In alphabetical order:

- Edoardo Bressanelli (King's College London, UK)
- Andrea Calderaro (Cardiff University, UK)
- Céline Colombo (University of Zurich, Switzerland)
- Andrea De Angelis (University of Lucerne, Switzerland)
- Mathilde van Ditmars (University of Lucerne, Switzerland)
- Ieva Grumbinaite (PPMI, Vilnius, Lithuania)
- Helder Fereira do Vale (Hankuk University of Foreign Studies, Seoul, Republic of Korea)
- Frederico Ferreira da Silva (University of Lausanne, Switzerland)
- Monica Ferrin (University of A Coruña, Spain)
- Sylvain Gambert (Delegation of the European Commission, Tirana, Albania)
- Chris Hanretty (Royal Holloway University London, UK)
- Anna Kandyla (Hellenic Foundation for European Foreign Policy, Greece)
- Vasyl Kucherenko (Shanghai International Studies University, China)
- Nele Leosk (IGL, Tallinn, Estonia)
- Davide Morisi (Collegio Carlo Alberto, Turin, Italy)
- Alina Ostling (European University Institute, Florence, Italy)
- Irene Palacios (University of Maastricht, The Netherlands)
- Trajche Panov (University of Bergen, Norway)
- Tiago Peixoto (The World Bank, Maputo, Mozambique)
- Yvette Peters (University of Bergen, Norway)
- Javier Ruiz-Soler (Simon Fraser University, Vancouver, Canada)
- Irene Sanchez-Vitores (University Carlos III, Madrid, Spain)
- José Santana Pereira (University of Lisbon, Portugal)
- Tiago Silva (University of Lisbon, Portugal)
- Tomasz Sizcek (University of Zurich, Switzerland)
- Kaat Smets (Royal Holloway University London, UK)
- Maarit Ströbele (Swiss Academy of Science, Berne, Switzerland)
- Jordanka Tomkova (Innovabridge, Caslano, Switzerland)
- Kristjan Vassil (University of Tartu, Estonia)
- Tomasz Wozniakowski (Hertie School of Governance, Berlin, Germany)
- Margarita Zavadskaya (University of Helsinki, Finland)

At the University of Lucerne, he has supervised the PhD thesis of Lea Portmann, who successfully defended her thesis in March 2020.

Research projects

- Alexander H. Trechsel successfully coordinated several international research projects over the past five years. Of particular interest is the euandi-project for the European Parliament Elections of 2014 and 2019. Trechsel had the overall project responsibility for the innovative voting advice applications. Over one hundred researchers from all over Europe collaborated in this research project – in each edition - and its output already found – and continues to find – its way into peer reviewed journals. Currently, Alexander H. Trechsel is the principal investigator of two research projects funded by the Swiss National Science Foundation.

Academic leadership

- Alexander H. Trechsel serves as the University of Lucerne's Vice Rector for Research and is a member of the University leadership
- He is the President of the University of Lucerne's Research Commission and of the University of Lucerne's SNF Research Commission
- From 2018 to 2019 he was a member of the Foundation's Council of the Swiss National Science Foundation.
- Alexander H. Trechsel has served for a full three-year term as Head of Department of the Department of Political and Social Sciences of the European University Institute. In this role, he was responsible for a Department composed of 15 full professors, 8 staff, about 180 PhD researchers and about 30 post-doctoral researchers. He represented the Department within the EUI's Executive Committee throughout his headship.
- He has also served as Head of Department of the Department of Political Science at the University of Lucerne (2017-18).
- Alexander H. Trechsel also directed the European Union Democracy Observatory at the EUI's Robert Schuman Centre for Advanced Studies until his move to Lucerne in 2016. EUDO has, over the years, become a very successful platform for the dissemination of research on democracy in Europe in general and of research on citizenship, under the guidance of Prof. Rainer Bauböck, in particular. It was recently transformed into the European Governance and Politics Program at the European University Institute.

Services to the community

- Alexander H. Trechsel regularly reviews for journals, among which: American Political Science Review, American Journal of Political Science, Political Analysis, Journal of Politics, British Journal of Political Science, Political Communication, European Journal of Political Research, European Union Politics, Journal of Elections, Public Opinion and Parties, Journal of European Public Policy, Journal of Public Policy, West European Politics, European Political Science Review, Journal of Common Market Studies, Swiss Political Science Review, International Journal of Electronic Government Research.
- He has served as evaluator and/or member of several scientific evaluation bodies, amongst which the European Research Council, the Eccellenza Committee of the Swiss National Science Foundation, the Belgian FNRS, the French ANR, the German DFG, the Italian MIUR, in hiring committees and promotion procedures at the European University Institute, SciencesPo Paris, University of Tartu and the Central European University.

Consulting experience

- Alexander H. Trechsel has served as a scientific consultant for international organisations, such as the United Nations Development Program, The World Bank, the European Commission, the European Parliament, and the Council of Europe.
- He has also produced expertise for the government of the Canton of Geneva, for the Parliament of the Canton of Berne, for the Swiss Federal Administration, and for private organisations. He is a partner at the Zurich-based consultancy company xUpery Ltd.

List of research output (last five years)

Prof. Dr. Alexander H. Trechsel, University of Lucerne, Switzerland (October 2020)

1. Publications in international peer-reviewed scientific journals

- Bright, Jonathan, Diego Garzia, Joseph Lacey, and Alexander H. Trechsel, 2020, "The representative deficit in different European Party Systems: An analysis of two elections to the European Parliament" ***Italian Journal of Electoral Studies***, 83(1): 45-57.
- Garzia, Diego, Lorenzo Cicchi, and Alexander H. Trechsel, 2020. "Mapping parties' positions on foreign and security issues in the EU, 2009-2014", ***Foreign Policy Analysis***, 16(4): 532-546.
- Moon, Suerie, Eva Maria Belser, Claudine Burton-Jeangros, Pascal Mahon, Cornelia Hummel, Settimio Monteverde, Tanja Krones, Stéphanie Dagron, Cécile Bensimon, Bianca Schaffert, Alexander H. Trechsel, Luca Chiapperino, Laure Kloetzer, Tania Zittoun, Ralf Jox, Marion Fischer, Anne Dalle Ave, Peter G. Kirchschlaeger, and Samia Hurst, 2020. "Continued Confinement of Those Most Vulnerable to COVID-19" ***Kennedy Institute of Ethics Journal*** (first online June 2020).
- Pianzola, Joëlle, Alexander H. Trechsel, Kristjan Vassil, Guido Schwerdt, and R. Michael Alvarez, 2019. "The impact of personalized information on vote intention: evidence from a randomized field experiment" ***Journal of Politics***, 81(3): 833-847.
- Garzia, Diego, Alexander H. Trechsel, and Andrea De Angelis, 2017. "Voting Advice Applications and Electoral Participation: A Multi-Method Study" ***Political Communication***, 34: 424–443.
- Garzia, Diego, Lorenzo de Sio, and Alexander H. Trechsel, 2017. "Party placement in supranational elections: An introduction to the euandi 2014 dataset", ***Party Politics*** 23(4): 333-341.
- Vassil, Kristjan, Mihkel Solvak, Pritt Vinkel, Alexander H. Trechsel, and R. Michael Alvarez, 2016. 'Diffusion of Internet Voting Usage Patterns of Internet Voting in Estonia Between 2005-2015', ***Government Information Quarterly***, 33(3): 453–459.
- Garzia, Diego and Alexander H. Trechsel, 2015. 'Systèmes d'Aide au Vote et comportement politique: tour d'horizon', ***Revue Internationale de Politique Comparée***, 22(2): 231-243.
- Bright, Jonathan, Diego Garzia, Joseph Lacey, and Alexander H. Trechsel, 2015. "Europe's voting space and the problem of second-order elections: A transnational proposal" ***European Union Politics*** 17(1): 184-198.

2. Peer-reviewed books / monographs

- Suhay, Elizabeth, Bernard Grofman, and Alexander H. Trechsel (eds.), 2020. *The Oxford Handbook of Electoral Persuasion*. New York: **Oxford University Press**.

3. Contributions to books

- Garzia, Diego and Alexander H. Trechsel, 2020. „The Engagement of European Political Scientists with Parties and Citizens: The Case of Voting Advice Applications" in Boncourt, Thibaud, Isabelle Engeli and Diego Garzia (eds.) *Political Science in Europe. Achievements, Challenges, Prospects*. London: **ECPR Press/Rowman & Littlefield International**.
- Suhay, Elizabeth, Bernard Grofman, and Alexander H. Trechsel, 2020. „A Framework for the Study of Electoral Persuasion", pp. 1-25 in Suhay, Elizabeth, Bernard Grofman, and Alexander H. Trechsel (eds.), 2020. *The Oxford Handbook of Electoral Persuasion*. New York: **Oxford University Press**.
- Trechsel, Alexander H. and Diego Garzia, 2020. „Voting Advice Applications: The Power of Self-Persuasion", pp. 925-945 in Suhay, Elizabeth, Bernard Grofman, and Alexander H. Trechsel (eds.), 2020. *The Oxford Handbook of Electoral Persuasion*. New York: **Oxford University Press**.
- Torcal, Mariano and Alexander H. Trechsel, 2016. "Explaining Citizens' Evaluations of Democracy", pp. 206-232 in Ferrín, Mónica and Hanspeter Kriesi (eds.), 2016. *How Europeans View and Evaluate Democracy*. Oxford: **Oxford University Press**.

4. Working papers

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Universität Luzern
Politikwissenschaftliches Seminar

Angepasstes Angebot Demo SCOPE AG für

Fokusgruppen und repräsentative Panelbefragung mit zwei Wellen zur übergeordneten Thematik «Digitalization and political conflict (DIGIPOL): parties, voters, and electoral alignment»

Die folgende Offerte basiert auf Ihrer Anfrage vom 17. September 2020 und diversen weiteren Abklärungen im Nachgang dazu.

Adligenswil, 1. Oktober 2020

Erstellt für:

Universität Luzern
Politikwissenschaftliches Seminar
Prof. Dr. Alexander Trechsel
Professor für Politikwissenschaft mit Schwerpunkt Politische Kommunikation
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1 Allgemeine Informationen

1.1 Firmenname und Zahlungsverbindung des Anbieters

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1.2 Verantwortliche Person für Auskünfte und die Leistungserbringung

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1.3 Vorstellung des Anbieters

DemoSCOPE ist das grösste von Inhabern persönlich geführte Schweizer Sozial- und Marktforschungsinstitut mit Standorten in Adligenswil und Fribourg. Als «Full-Service & Full-Range Provider» bietet DemoSCOPE sämtliche Sozial- und Marktforschungsdienstleistungen sowie -methoden aus einer Hand. DemoSCOPE fokussiert auf wissenschaftlich fundierte quantitative und qualitative Forschung zu anspruchsvollen Themen und kann dabei auf akademisch qualifizierte Mitarbeitende mit einschlägiger Forschungs- und Publikationserfahrung bauen. Wir verfügen über eine vielfältige, langjährige Erfahrung mit umfangreichen und komplexen Sozialforschungsprojekten insbesondere auch aufgrund der Durchführung von offiziellen Bundesaufträgen und der Zusammenarbeit mit verschiedenen akademischen Institutionen. Diese Kompetenz setzen wir gerne ergebnisorientiert auch in kleineren Studien um.

Die DemoSCOPE-eigenen Telefonlabore mit 90 Arbeitsplätzen in Adligenswil und 40 Arbeitsplätzen in Fribourg werden zentral von Adligenswil aus geführt. Die jeweils lokal bestens verankerten Laborleitungen sorgen für eine effiziente und zielführende Realisation von jährlich mehreren hunderttausend computergestützten Interviews (CATI). Von allgemeinen Bevölkerungsbefragungen zu relevanten Themen über spezifische Fragestellungen an konkrete Zielgruppen bis hin zu umfangreichem Hotline- und Auskunftsbetrieb decken die Telefonlabors sämtliche Dienstleistungen ab.

Web-Interviews (CAWI) ermöglichen bei DemoSCOPE komplexe Routings, kundenspezifische Designs sowie den Einbau von externen Tools, Visuals, Videos und vielem mehr. Die von DemoSCOPE verwendete Mixed-Mode-Software ermöglicht einerseits den Einsatz von Web-Interviews als Ergänzung zu anderen Befragungsmethoden. Anderseits verwenden wir die Software in zahlreichen Studien als eigenständige Methode. In beiden Anwendungsbereichen können dabei sowohl kundeneigene oder externe Adressen wie auch der Online-Panel (DemoSCOPE-Community) als Befragungsgrundlage verwendet werden.

Eine weitere DemoSCOPE-eigene Abteilung führt jährlich mehrere tausend persönliche computergestützte Interviews (CAPI) an vielfältigen Standorten (Privatadressen, spezifische thematisch relevante Standorte, Verkaufspunkte, etc.) und mit sehr unterschiedlicher thematischer Komplexität und Fragebogendauer durch.

Neben der Datenerhebung mittels verschiedener Methoden versteht sich DemoSCOPE als Expertin in der Datenverarbeitung und Datenanalyse:

1. Sozial- und Marktforschungsinformatik: Wir arbeiten mit einer leistungsstarken Software, welche den gesamten Prozess von Studien und Erhebungen unterstützt, unterschiedliche Methoden der Befragung direkt integriert sowie umfangreiche Gestaltungsmöglichkeiten offenlässt.
2. Datenverarbeitung und Analyse: Die Aufbereitung, Verarbeitung und Analyse von grossen Datensätzen wie auch Hochrechnungen sind für uns Standard. Berichte erstellen wir stets gemäss individuellen, kundenspezifischen Bedürfnissen.
3. ICT (Information and Communication Technology): Ein eigenes leistungsfähiges Rechenzentrum in Adligenswil mit virtuellen und physischen Servern, die Büroinformatik und die Telefonie-Infrastruktur zur Abwicklung der telefonischen Studien sind auf dem neuesten technischen Stand und werden von einem eigenen Team im Haus betrieben. Reibungslose Abläufe und eine hohe Transparenz sind damit garantiert.

Sämtliche Prozesse und Daten werden ausschliesslich auf DemoSCOPE-eigener IT-Infrastruktur innerhalb der Schweiz nach höchsten Datenschutzkriterien betrieben und gespeichert. Auch unsere Backups werden in einem Schweizer Datencenter der höchsten Sicherheitsstufe gespeichert.

2 Ausgangslage und Zielsetzung

Im Rahmen eines Finanzierungsgesuchs durch den Schweizerischen Nationalfonds (SNF) will die Professur von Herrn Prof. Dr. Alexander Trechsel vom **Politikwissenschaftlichen Seminar der Universität Luzern** die politischen Folgen der Digitalisierung und mögliche, damit einhergehende Zusammenhänge hinsichtlich Informationssuche, politischer Beteiligung und öffentlicher Meinung in der Schweizer Bevölkerung untersuchen.

Das Projekt sieht unter anderem zwei verschiedene Studienelemente vor, welche in den Jahren 2022/2023 durgeführt werden sollen. Dabei handelt es sich um insgesamt vier **Fokusgruppen** mit je acht bis zehn Teilnehmenden (Modul 1) und einer **repräsentative Online-Panelbefragung der Schweizer Bevölkerung** mit zwei Wellen (Modul 2).

DemoSCOPE wurde von Herrn Prof. Dr. Alexander Trechsel angefragt, dem Politikwissenschaftlichen Seminar der Universität Luzern für die beiden genannten Module ein Angebot zu unterbreiten, welches in den SNF-Forschungsantrag einfliesst.

Gerne gehen wir im Folgenden detaillierter auf die beiden Module ein und zeigen jeweils pro Modul die wichtigsten Aspekte des geplanten **Studiendesigns** (Kapitel 3) und des **Timings** (Kapitel 4) auf. Im Anschluss daran folgen ausgewählte **Referenzen** (Kapitel 5), die **Team- und Projektorganisation** (Kapitel 6) sowie die für die Umsetzung geltenden **Leistungen und Kosten** je Modul (Kapitel 7).

3 Studienelemente/Module

3.1 Modul 1: Fokusgruppen

Im zweiten Halbjahr 2022 sollen insgesamt **vier Fokusgruppen** mit jeweils acht bis zehn Teilnehmenden durchgeführt werden. Der übergeordnete Themenschwerpunkt der Fokusgruppen sind die politischen Folgen der Digitalisierung und mögliche, damit einhergehende Zusammenhänge hinsichtlich Informationssuche, politischer Beteiligung und öffentlicher Meinung. Die genauen Fragestellungen werden rechtzeitig von der Universität Luzern in Form eines Fokusgruppen-Leitfadens erarbeitet.

Die leitfadenbasierten Gruppendiskussionen finden in einem für Gruppendiskussionen geeigneten Sitzungszimmer statt, wobei jeweils zwei Fokusgruppen im urbanen und im ruralen Raum durchgeführt werden. Durchgeführt werden die Fokusgruppen voraussichtlich in Luzern sowie in einer Gemeinde im Luzerner Hinterland.

Die Rekrutierung der Fokusgruppen-Teilnehmer/innen erfolgt durch DemoSCOPE mit dem Ziel, je Fokusgruppe jeweils mindestens acht Teilnehmer/innen anwesend zu haben. Wir empfehlen hierfür eine Überrekrutierung je Gruppe von zwei Personen. Folglich ergibt sich eine Brutto-Rekrutierung von insgesamt 40 Personen. Die Grundgesamtheit für die Durchführung der Fokusgruppen bilden in der Deutschschweiz wohnhafte und stimmberechtigte Personen mit einer kombinierten Alters- und Geschlechtsquote.

Vorgeschlagenes Studien-Design

Für die Fokusgruppen schlagen wir – bezugnehmend auf die einleitenden Bemerkungen – nachfolgendes Studiendesign vor:

Methodik	Leitfadenbasierte Gruppendiskussionen (Fokusgruppen) mit dem Themenschwerpunkt der politischen Folgen der Digitalisierung und mögliche, damit einhergehende Zusammenhänge hinsichtlich Informationssuche, politischer Beteiligung und öffentlicher Meinung.
Leitfaden	Der Leitfaden wird durch die Universität Luzern erarbeitet.
Anzahl Gruppen / Teilnehmende	Insgesamt sollen vier Gruppen mit je 8 bis 10 Personen gebildet werden. Die Bruttorekrutierung umfasst 10 Personen pro Gruppe, wobei sich die gesamte Bruttorekrutierung auf 40 Personen beläuft.
Grundgesamtheit	Die Grundgesamtheit respektive die Zielgruppe umfasst die stimmberechtigte Wohnbevölkerung der Deutschschweiz im Alter ab 18 Jahren.
Durchführungsort	Gegenwärtig sind zwei Durchführungsorte geplant. Jeweils zwei Fokusgruppen finden in der Stadt Luzern und im Luzerner Hinterland statt, jeweils in einer für die Durchführung von Fokusgruppen geeigneten Lokalität.
Rekrutierung	Die Rekrutierung der Teilnehmer/innen erfolgt durch DemoSCOPE.
Dauer	Circa 2 Stunden pro Fokusgruppendiskussion
Moderation	Die Moderation übernimmt DemoSCOPE. Das Politikwissenschaftliche Seminar der Universität Luzern wird während den Fokusgruppen-Interviews anwesend sein.
Aufzeichnung	DemoSCOPE organisiert die Audio-Aufnahmen (optional: Video-Aufnahmen) der Fokusgruppen.
Incentives	Die Incentives werden via DemoSCOPE organisiert und bereitgestellt. Jede teilnehmende Person erhält CHF 70.- für die Teilnahme.
Auswertung	Die Auswertung erfolgt durch das Politikwissenschaftliche Seminar der Universität Luzern.

3.2 Modul 2: Repräsentative Panelbefragung mit zwei Wellen

Im Nachgang zur Durchführung des Moduls 1 (Fokusgruppen) soll eine **repräsentative Online-Panelbefragung der Schweizer Bevölkerung mit zwei Wellen** realisiert werden. Thesen und Themen aus dem ersten Modul werden in den Fragebogen einfliessen.

Geplant ist, dass die erste Welle während eines Abstimmungskampfes einer eidgenössischen Vorlage und die zweite unmittelbar nach dem Abstimmungswochenende im Herbst 2023 stattfinden soll. Das Ziel dabei ist, dass ein Netto-Sample von mindestens n = 2'000 Antworten nach der zweiten Befragungswelle vorliegen soll. Wie im Briefing-Telefonat besprochen, soll die Befragung der beiden Wellen ausschliesslich online (CAWI) durchgeführt werden.

Ein Teil des Fragebogens hat einen experimentellen Charakter. Konkret wird im Online-Fragebogen mittels Re-Direct ein experimenteller Block eingebaut, bei welchem die Auskunftspersonen auf eine «Voting Advice Application (VAA)» zugreifen. Da mittels Umsetzung der zwei Befragungswellen insbesondere auch der Einfluss des experimentellen Designs untersucht werden soll, werden für die zweite Befragungswelle nur jene Personen kontaktiert, welche bei der ersten Befragungswelle bereits online geantwortet haben.

Unser Online-Team programmiert Online-Fragebogen und stellt eine Landing-Page bereit. Mittels eines Ankündigungsschreibens laden wir die Teilnehmenden zur Online-Befragung ein. Um eine möglichst optimale Antwortquote respektive Antwortzahl zu erhalten, schlagen wir zudem folgende Massnahmen vor:

- Offizieller Absender Universität Luzern (Brief-Layout / Versand-Couverts) und Hinweise zum durchführenden Institut (DemoSCOPE)
- Erwähnung der Zielsetzung und des Studienzwecks im Brief
- Bereitstellung einer einfachen Landing-Page (bspw. www.demoscope.swiss/digital) mit Hinweisen zur Studie und zum Datenschutz sowie dem Login-Fenster
- Individualisierte Login-Informationen zum Online-Fragebogen (Login-Name und Passwort)
- Aufführen der Teilnahmefrist
- Versand eines Erinnerungsschreibens (ca. 2 Wochen nach Ankündigungsschreiben)
- Telefon- und/oder E-Mail-Hotline seitens DemoSCOPE. Diese dient insbesondere der Beantwortung von technischen oder inhaltlichen Fragen.

Die Brieftexte werden in einem Entwurf von DemoSCOPE erarbeitet und seitens Auftraggeberschaft ergänzt und finalisiert. Die Übersetzungen ins Französische und Italienische übernimmt die Universität Luzern, den Druck der Briefschaften (Ankündigungs- und Erinnerungsbrief), das Verpacken und das Versenden (exkl. Porto) übernimmt DemoSCOPE. Die Ankündigungsbriefe werden per B-Post-Massenversand verschickt, die Erinnerungsbriefe per A-Post. Damit wird sichergestellt, dass sich nicht allzu viele Antworten mit den Erinnerungen kreuzen. Falls seitens Universität Luzern gewünscht, kann dies jedoch gerne geändert werden.

Um dem offiziellen Charakter der Erhebung gerecht zu werden, sollten die Briefe in Fenster-Couverts C5 der Universität Luzern verschickt werden. Diese müssen in ausreichender Anzahl und rechtzeitig von der Universität Luzern zur Verfügung gestellt werden.

Aufgrund diverser Umfragen mit wissenschaftlichem Kontext, welche DemoSCOPE in der Vergangenheit durchgeführt hat sowie der anzunehmenden Themenaffinität rechnen wir mit einer Antwortquote von ca. 25% bis 30% in der ersten Welle. Entsprechend bedarf es bei der Adressbestellung über einen externen Adresslieferanten (AZ Direct[1] oder SRPH vom Bundesamt für Statistik BFS) eines entsprechenden Over-Samplings. Zudem schlagen wir sicherheitshalber vor, ein Reserve-Sample zu beziehen. Des Weiteren kann damit gerechnet werden, dass ca. 70% der befragten Personen (mit Online-Teilnahme) aus der ersten Welle, auch an der zweiten Befragung teilnehmen. Um nach dem Abschluss der zweiten Welle wie gewünscht 2'000 Antworten vorliegen zu haben, planen wir mit folgendem Stichprobenumfang (inkl. einem Reserve-Sample):

Angestrebte Stichprobengrösse (nach 2. Welle)	Anzahl benötigter Adressen	Anzahl benötigter Reserve-Adressen
n = 2'000	n = 10'000	n = 2'000

[1] DemoSCOPE arbeitet regelmässig mit dem Adressbroker AZ Direct zusammen und bezieht darüber kontinuierlich Adressen für diverse Projekte.

Vorgeschlagenes Studien-Design

Für die schweizweit repräsentative Panelbefragung in zwei Wellen schlagen wir – bezugnehmend auf die einleitenden Bemerkungen – nachfolgendes Studiendesign vor:

Methodik	Online-Befragung mit brieflicher Kontaktierung (Ankündigungs- und Erinnerungsbrief). Zugang via Landing-Page und individuellem Zugang zum Online-Fragebogen. Die Landing-Page erstellt DemoSCOPE. Die Übersetzungen des deutschsprachigen Landing-Page-Textes ins Französische und Italienische liefert die Universität Luzern.
Grundgesamtheit	Die Grundgesamtheit umfasst die sprachassimilierte stimmberechtigte Wohnbevölkerung der gesamten Schweiz im Alter ab 18 Jahren.
Adressbasis	Ausreichend Adressen (Over-Sampling, Reserve-Adressen), welche über einen externen Adresslieferanten zur Verfügung gestellt werden. Die Brutto-Adressbestellung basiert auf einem Stichprobenplan (inkl. Oversampling) um ein möglichst repräsentatives Netto-Sample zu erzielen. Die beiden Wellen sollen mit der gleichen Stichprobe und folglich mit den gleichen Teilnehmenden durchgeführt werden, wobei für die zweite Befragungswelle nur jene Zielpersonen kontaktiert werden, welche die erste Befragungswelle online beantwortet haben und ihr explizites Einverständnis für die Teilnahme an der zweiten Welle gegeben haben. Adressquelle: AZ Direct oder SRPH-Adressen (muss noch final geklärt werden, da u.a. klare, zu erfüllende Voraussetzungen für die SRPH-Adressbestellung bestehen).
Briefversände	Ankündigungs- und Erinnerungsbrief (DE, FR und IT). Offizielle Briefe (Absender Universität Luzern) in Fenster-Couverts der Universität Luzern. Versand Ankündigungsbriefe per B-Post (Massenversand), Erinnerungsbrief per A-Post. Die Portokosten übernimmt die Universität Luzern. Die Briefe werden durch DemoSCOPE erstellt, gedruckt, konfektioniert und versendet.
Stichprobe & Quotierung	Nach der zweiten Befragungswelle sollen mindestens n = 2'000 abgeschlossene Interviews vorliegen. Falls notwendig werden in der ersten Befragungswelle rechtzeitig zusätzlich Reserve-Adressen aktiviert. Um eine bevölkerungsrepräsentative Verteilung der finalen Netto-Stichprobe zu erhalten, werden als Richtwert 1’300 Interviews in der Deutschschweiz, 500 Interviews in der Westschweiz und 200 Interviews im Tessin angestrebt.
Fragebogen	Der Fragebogen liegt noch nicht final vor. Die Beantwortungsdauer wird max. 20 Minuten betragen, idealerweise jedoch nur 15 Minuten. Die zweite Befragung wird deutlich kürzer sein, da gewisse Fragen nicht mehr gestellt werden. Nebst inhaltlichen Fragen enthält der Fragebogen auch eine randomisierte experimentelle Komponente, so dass das Sample in bis zu vier Subgruppen aufgeteilt wird, welche

	teilweise unterschiedliche Teil-Frageblöcke erhalten, bzw. entlang unterschiedlicher Vorab-Informationen unterschiedlich befragt werden. Des Weiteren ist geplant, im Rahmen der Online-Befragung auf externen Content («Voting Advice Application (VAA)») zuzugreifen. Dies erfolgt mittels personalisiertem Re-Direct um das Antwortverhalten und die Nutzung des externen Tools der Zielperson zuordnen zu können.[2] Nach Abschluss der externen Sequenz folgt wiederum mittels Re-Direct der Transfer in den Basis-Fragebogen, wo die Befragung weitergeführt und abgeschlossen wird. Neben einleitenden soziodemographischen Fragen werden u.a. Fragen zu digitalen Kompetenzen, Einstellungen gegenüber der Digitalisierung der Gesellschaft, politischer Partizipation, Wahlverhalten und Standpunkten gegenüber politischen Fragestellungen hinsichtlich einer digitalen Gesellschaft gestellt. Um die inhaltliche Konsistenz der Fragen vollumfänglich zu gewährleisten, wird das Politikwissenschaftliche Seminar der Universität Luzern die Übersetzungen bereitstellen. Die Programmierung erfolgt allerdings nur einmal, da wir mit unseren sog. Translator-Files in der Lage sind, andere Sprachen effizient und fehlerfrei zu importieren.
Hotline	DemoSCOPE stellt eine E-Mail und/oder Telefon-Hotline zur Verfügung, welche den Teilnehmenden als Anlaufstelle für Fragen etc. dient.
Auswertung	Seitens des Politikwissenschaftlichen Seminars der Universität Luzern ist keine Auswertung in Form von Kreuztabellen gewünscht. Entsprechend erfolgt die Lieferung der Ergebnisse als SPSS-Rohdatensatz (oder in jedem anderen gängigen Format z.B. CSV). Der Rohdatensatz enthält neben den soziodemographischen und fragebogenbasierten Variablen auch Paradaten (Dauer der Beantwortung von Online-Fragebogen, genutzter Browsertyp, Teilnahmemethode, etc.) und eine Gewichtungsvariable. Letztere basiert auf aktuellen Zahlen des Bundesamts für Statistik BFS und dient als Basis für die Gewichtung der Stichprobe, um die reale Verteilung in der Grundgesamtheit abzubilden.

[2] DemoSCOPE realisiert regelmässig vergleichbare Lösungen, bei denen bspw. nach den Einstiegsfragen (Screening, Quotierung) auf einen extern programmierten Fragebogen zugegriffen wird oder als Teil einer Befragung ein externes Tool (für Conjoint-Messungen, o.ä.) verwendet wird.

4 Timing

Da der Zeitpunkt der Erhebung – gemäss Telefon-Briefing in den Jahren 2022/2023 – einen gewissen zeitlichen Freiraum gewährleistet, steht das konkrete Timing noch nicht final fest. Dieses wird nach erfolgter Auftragserteilung zusammen mit Herrn Prof. Dr. Trechsel vom Politikwissenschaftlichen Seminar der Universität Luzern definiert. Wir weisen somit noch nicht alle Daten fix aus, sondern zeigen lediglich auf, welche Basis-Arbeitsschritte nötig sein werden und mit wieviel Zeitbedarf pro Arbeitsschritt ungefähr gerechnet werden muss.

Projekt-Setup	**Zeitraum**
Telefon-Briefing	17. September 2020
Versand Offerte	1. Oktober 2020
Formelle Auftragserteilung	sobald wie möglich
Modul 1: Fokusgruppen (Herbst 2022)	**Zeitraum**
Unterstützung bei der Entwicklung, Planung und Organisation der Fokusgruppendiskussionen	7 bis 10 Tage
Durchführung und Moderation der Fokusgruppen	ca. 2 h pro Fokusgruppe
Nachbereitung der durchgeführten Fokusgruppen-Interviews	ca. 4 Tage
Modul 2: Repräsentative Panelbefragung (Herbst 2023)	**Zeitraum**
Welle 1	
Definition und Bestellung Adressen (via AZ Direct oder SRPH)	tbd
Erarbeitung Briefe und Landing-Page	tbb
Finalisierung Online-Fragebogen / Redaktionsschluss	ca. 1 Woche
Programmierung Online-Fragebogen / Testing	ca. 1 Woche
Feldphase	ca. 4 Wochen
Versand Ankündigungsbrief	tbd
Versand Erinnerungsbrief	tbd
Datenaufbereitung	ca. 3 Tage
Ablieferung Ergebnisse	tbd
Welle 2	**Zeitraum**
Anpassung Briefe und Landing-Page	tbd
Anpassung Online-Fragebogen / Redaktionsschluss	ca. 1 Woche
Anpassung Programmierung Online-Fragebogen / Testing	ca. 1 Woche
Feldphase	ca. 4 Wochen
Versand Ankündigungsbrief	tbd
Versand Erinnerungsbrief	tbd
Datenaufbereitung	ca. 3 Tage
Ablieferung Ergebnisse	tbd

5 Referenzen

Auftraggeber	Auftrag/Thema	Zeitraum
Bundesamt für Statistik (BFS)	Digital via TeamViewer, Microsoft Teams oder Skype durchgeführte kognitive und Usability-Tests im Rahmen des Mandats «Vorbereitung und Durchführung der Hotline, der telefonischen Rückfragen und der eCensus der Strukturerhebung der Volkszählung 2020 bis 2024»	2020–2024 Vorgängig bereits 2017/2018
Universität Bern, Institut für Kommunikations- und Medienwissenschaften und Universität Koblenz-Landau, Institut für Kommunikationspsychologie und Medienpädagogik	Dreiteilige Panelerhebung zum Thema «populistische Einstellung und Mediennutzungsverhalten»	2019–2021
ETH Zürich	Entscheidungsexperiment zum Thema Stromkonsum	2020
Universität Zürich, Institut für Soziologie	Mixed-Mode-Studie (CAWI/CATI) zu «Digitales Leben - Digitale Ausgrenzung» für ein SNF-Projekt, durchgeführt mit SRPH-Adressen	2019
Universität Luzern, Kultur- und Sozialwissenschaftliche Fakultät, Politikwissenschaftliches Seminar	Online-Befragung im Rahmen einer Promotionsarbeit zum Thema «Wissenschaft und Politik – Woran politische Akteur/innen glauben» in der Schweizer Wohnbevölkerung auf Basis von SRPH-Adressen mit insgesamt über 2'400 Antworten	2019
Universität Zürich, Institut für Publizistikwissenschaft und Medienforschung (IPMZ)	«WissensCHaftsbarometer». Bevölkerungsrepräsentative CATI-Befragung zur Einstellung und zum Informationsverhalten zum Thema Wissenschaft	2016/2019
École polytechnique fédérale de Lausanne (EPFL), Laboratory on Human-Environment Relations in Urban Systems	Online-Befragung zu Essgewohnheiten, mit SRPH-Adressen in der Schweiz sowie im darauffolgenden Jahr in 5 anderen Ländern	2018 und 2019
HTW Chur	Befragung von 5 verschiedenen internen und externen Zielgruppen zum Image der HTW Chur, z.T. 2019 wiederholt	2017 und 2019
Bundesamt für Bevölkerungsschutz (BABS)	Qualitative Studie zu Piktogramm-Entwürfen Alertswiss (Online in der DemoSCOPE-Community und ergänzende Einzelgespräche mit Personen, die Sprachdefizite aufweisen	2018
Schweizerisches Rotes Kreuz (SRK)	Fokusgruppen zum Thema Inland-Arbeit (Schwerpunktthema: Entlastung)	2017

6 Team und Projektorganisation DemoSCOPE

Das zuständige Sozialforschungsteam von DemoSCOPE arbeitet regelmässig für Forschungsinstitute, Hochschulen und/oder Universitäten. Das Projektteam seitens DemoSCOPE setzt sich zusammen aus Dominik Fröhli, M.A. (Leiter Sozialforschung) und Alessandra Gut, M.A. (Stv. Projektleiterin Sozialforschung). Es kann bei Bedarf und in Absprache mit dem Politikwissenschaftlichen Seminar der Universität durch weitere DemoSCOPE-Projektmitarbeitende ergänzt werden.

Dominik Fröhli, MA, Leiter Sozialforschung

Dominik Fröhli, Senior Research Consultant, leitet bei DemoSCOPE den Bereich Sozialforschung und betreut schwerpunktmässig Mandate von öffentlichen Auftraggebern, Verbänden und bekannten Nonprofit-Organisationen. Weiter ist er als Projektleiter für mehrjährige Grossaufträge des Bundesamts für Statistik (u.a. Erhebung über die Einkommen und Lebensbedingungen (SILC), Alpen- und grenzquerender Personenverkehr) zuständig. Dominik Fröhli hat an der Universität Luzern Gesellschafts- und Kommunikationswissenschaften studiert.

Alessandra Gut, MA, Stv. Projektleiterin Sozialforschung

Alessandra Gut arbeitet als Projektleiterin Sozialforschung bei DemoSCOPE. Sie ist für die Akquise, Konzipierung, Durchführung und Berichterstattung bei Umfrageprojekten und Erhebungen im Bereich Sozial- und Medienforschung zuständig. Nach ihrem Masterabschluss in Gesellschafts- und Kommunikationswissenschaften arbeitete sie als wissenschaftliche Mitarbeiterin am Soziologischen Seminar an der Universität Luzern. Vor ihrer Anstellung bei DemoSCOPE erhielt sie als Account Executive in einer Zürcher Kommunikationsagentur umfassende Einblicke in die Bereiche Kommunikation, Marketing und Public Relations.

Das Projektleitungsteam wird unterstützt von erfahrenen Fachteams aus den Bereichen Programmierung, Datenauswertung und Adressmanagement. Weiter verfügt das Team während der gesamten Projektphase über eine erfahrene Sozialforschungsassistentin.

7 Leistungen und Kosten

7.1 Leistungskatalog

Abgeleitet aus unseren in den vorangegangenen Kapiteln beschriebenen Vorgehensvorschlägen definieren sich die von DemoSCOPE erbrachten Leistungen wie folgt:

7.1.1 Modul 1: Fokusgruppen

Leistungen DemoSCOPE:

- Rekrutierung der Teilnehmer/innen und Organisation der Durchführungslokalitäten
- Moderation von vier Fokusgruppen mit je 8-10 Teilnehmenden (ca. 2h pro Fokusgruppe)
- Audio- (optional Video-)Aufzeichnung der Fokusgruppendiskussionen
- Organisation und Bereitstellung der Incentives pro Teilnehmer/in
- Erarbeitung technischer Projektbericht in deutscher Sprache
- Projektleitung und Projektadministration

Leistungen Universität Luzern:

- Bereitstellung des leitfadenbasierten Fragebogens in deutscher Sprache

7.1.2 Modul 2: Repräsentative Panelbefragung mit zwei Wellen

Leistungen DemoSCOPE

- Mitarbeit in der Erarbeitung der Fragebogen (gemeinsam mit Auftraggeber)
- Programmierung der Fragebogen im DemoSCOPE-Standardlayout in DE, FR, IT
- Bestellung der Adressen via externen Adresslieferanten (auf Basis eines Stichprobenplans)
- Adressaufbereitung
- Briefentwürfe und Finalisierung Briefschaften (gemeinsam mit Auftraggeber) in DE, FR und IT
- Einrichten Landing-Page
- Druck und Versand Ankündigungsbriefe (B-Post Massenversand, exkl. Porto)
- Druck und Versand Erinnerungsbriefe (A-Post, exkl. Porto)
- Durchführung Interviews (Zielgrösse nach Welle 2: mind. n = 2'000)
- Hotline (Telefon/E-Mail) für inhaltliche/technische Fragen
- Fortlaufende Qualitätskontrolle
- Datenaufbereitung und -auswertung
- Auswertung in Form eines SPSS-Datensatzes oder in einem alternativen Format (inkl. Gewichtungsvariable)
- Erarbeitung technischer Projektbericht in deutscher Sprache
- Reporting-Lieferung an Auftraggeber
- Projektleitung und Projektadministration

Leistungen Universität Luzern:

- Bereitstellung des Fragebogens als Programmier- und Layoutvorlage
- Übersetzungen Fragebogen, Landing-Page und Briefschaften in FR und IT
- Tragen der Portokosten

7.2 Kostenübersicht

Die Kosten (exkl. MwSt. 7.7%) für die in Kapitel 7.1 aufgeführten Leistungen werden nachfolgend aufgeführt.

Leistung	**Kosten** (exkl. MwSt. 7.7%)
Modul 1: Fokusgruppen	
Realisierung der vier Fokusgruppen (à ca. 8 Teilnehmenden)	CHF 14'000.-
Modul 2: Repräsentative Panelbefragung mit zwei Wellen	
Fixkosten	
Realisierung 1. Befragungswelle	CHF 35'000.-
Realisierung 2. Befragungswelle	CHF 15'000.-

Nachfolgend aufgeführt ist das **Total der kalkulierten Fixkosten.** Zusätzlich zu den Fixkosten berechnen wir einen **Reserve-/Marge-Betrag im Umfang von 5%**, welcher für zusätzliche und unvorhergesehene Aufwände beigezogen werden kann. Davon ausgenommen sind allfällige Mehrkosten der ausgewiesenen variablen und optionalen Kosten.

	Kosten (exkl. MwSt. 7.7%)
Subtotal (nur Fixkosten)	CHF 64'000.-
Reserve / Marge (5%)	CHF 3'200.-
Total (= Kostendach Fixkosten)	**CHF 67'200.-**

8 Allgemeines / Richtlinien

Verbands-Normen	Die Durchführung der Erhebung erfolgt nach den Normen von vsms swiss interview institute® sowie ESOMAR.
Gültigkeit	Dieses Angebot ist ab Zustelldatum gültig bis zur Vergabe der SNF-Finanzierung.
Leistungsänderungen	Allfällige Änderungen der in diesem Angebot definierten Untersuchungsanlage oder Leistungen berechtigen DemoSCOPE zu einer Neukalkulation.
Mehrwertsteuer	Sämtliche Kostenangaben sind jeweils exkl. MwSt. (7.7%) aufgeführt.
Teuerung	Die Kostenangaben beruhen auf dem Indexstand vom Januar 2020, massgebend für die definitiven Kosten ist der Indexstand im Zeitpunkt der Auftragserteilung.
Zahlungskonditionen	Je die Hälfte der vereinbarten Auftragssumme bei Auftragserteilung und bei Ablieferung der Ergebnisse, zahlbar bis jeweils 30 Tage nach Rechnungstellung.
Autorenrechte	Dieses Angebot wurde individuell für die Universität Luzern erstellt. Die Rechte für die von DemoSCOPE erstellten Lösungsvorschläge liegen bei DemoSCOPE. Eine Weitergabe an Dritte in jeglicher Form – auch nur auszugsweise oder sinngemäss – ist nur mit vorheriger schriftlicher Genehmigung durch DemoSCOPE erlaubt.
AGB	Die beiliegenden Allgemeinen Geschäftsbedingungen der DemoSCOPE-Gruppe vom Juli 2013 sind integrierender Bestandteil dieses Angebotes (siehe auch www.demoscope.ch/agb).
SWISS INSIGHTS Swiss Data Insights Association	DemoSCOPE ist Mitglied des Verbands SWISS INSIGHTS und garantiert, dass keine Interviews mit offenen oder verdeckten Werbe-, Verkaufs- oder Bestellabsichten durchgeführt werden (siehe auch https://swiss-insights.ch/).

Es würde uns sehr freuen, dieses interessante, zweiteilige Projekt mit Ihnen zusammen realisieren zu dürfen. Wir bitten Sie, sich bei allfälligen Fragen mit uns in Verbindung zu setzen.

Mit freundlichen Grüssen

Dominik Fröhli
Leiter Sozialforschung

Alessandra Gut
Projektleiterin Sozialforschung

mobilab.

designing &
developing for
mobile

University of Lucerne
Contact person: Prof. Dr. Alexander Trechsel
alexander.trechsel@unilu.ch

development estimation for DIGIPOL product

project description

The study investigates the socio-political consequences of the digital revolution, specifically how digitalization affects public opinion, political behaviour and partisan politics. Not only will this research help to better identify the societal challenges posed by continued digitalization, but also to provide new insights regarding citizens' attitudes towards digitalization issues. Finally, it will attempt to answer the questions of how political actors and parties deal with such issues, and how voters react to the political offer regarding the latter. In order to test the hypotheses regarding voters, original survey data is collected among Swiss citizens. A survey experiment is included in the first wave to test the hypothesis regarding the effect of increased salience of digitalization on the realignment of party preferences. The Swiss federal elections held in October 2023 will serve as a case in point to investigate this expectation. We expect that winners respectively losers of digitalization react to the partisan offer and cast their vote accordingly. In order to test this expectation, we experimentally increase the salience of digitalization issues by asking respondents to make use of a voting advice application (VAA) that is designed for the purpose of this study.
Mobi Lab's role is to support the client technically to successfully run the experiment with the VAA.

estimation summary

Estimation type	Time and Material	Project's budget is not fixed and may change during the process depending on the changes or adjustments made to the scope. The costs are calculated by time spent.
Intellectual Property Rights	Customer	Intellectual property and ownership rights will be transferred to the University of Lucerne after closing all bills relevant to the project.
Flexibility to change requirements	YES	The exact work definition and scope is based on the Backlog items. It is assumed the work is defined by the goals and the decision making process allows balancing estimated scope and budget

time-based project cost

work description	time in hours	cost
Project Management	12	€780
Web development	100	€6500
QA & Live delivery	8	€520
Value Added Taxes	20%	€1560
Estimated cost for the project		**€9360**
Work time cost		65 €/h

* Prices do not include VAT

project team, communication channels and project settings

Team will be combined by following members:

- Product Manager
- Web Engineer
- QA specialist

Following communication channels are used:

- Face to face meetings if needed (i.e.kick-off meeting)
- IM multi-chats
- IM video-calls

- E-mail
- Jira issue tracker

the agile process

During the process the team is following SCRUM, usually with 1-week iterations with pre-planned scope.

about Mobi Lab

Mobi Lab OÜ (formerly known as the software development team of Mobi Solutions) has been developing mobile applications since 2003, way before there were apps as we know them today.

We were the first software company in Estonia to start developing apps for Android (in 2009), whereas Indilo Wireless (purchased by Mobi in 2011 and now merged with Mobi Lab), was the first to start developing for iOS in 2008.

For the past 7 years we have been a key Android and iOS development partner for Skype. This has given us an experience that most developers can only dream of - working on hugely successful consumer-facing apps that are used by tens of millions of people every day.

Additionally, our team has shipped hundreds of other mobile apps - both for small startups and global companies - giving us a broad experience on working with customers of all sizes and from more than dozen countries.

Our software teams in Tartu and Tallinn include over 40 passionate and open-minded engineers, designers and quality experts who exclusively focus on application development for iOS, Android and Windows platforms.

Reference projects are available on request.

contact

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Product Manager

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polsan
Büro für Politikanalyse
und -beratung

Bern, 1. Oktober 2020

Nutzung der Daten zu Digitalisierung aus dem POLITmonitor

Sehr geehrte Damen und Herren

POLItmonitor ist die online-Datenbank von politischen Geschäfte aus der Schweiz. Die Datenbank beinhaltet unter anderem alle politischen Vorstösse, welche auf Bundesebene und in den 26 Kantonen eingereicht werden. Durch die umfassende Geschäftssammlung wird sichergestellt, dass jedes Geschäft, welches sich in der parlamentarischen Phase befindet, erfasst, begleitet und mit vordefinierten Globalthemen verstichwortet wird. Ob Interpellation, einfache Anfrage oder Kommissionsmotion, ob Volksinitiative oder Geschäfte von Bundes- bzw. Regierungsrat, jedes Geschäft wird erfasst.

Das Politikberatungsbüro polsan AG, der Schweizerische Gemeindeverband (SGV) und die Schweizerische Informatikkonferenz (SIK) steuern für dieses Partnerprojekt die inhaltliche und politische Expertise bei, basis06 als Beratungsunternehmen für Business Analytics und die Automatisierung von Wissensarbeit realisiert die technische Umsetzung. Diese starke Partnerschaft stellt sicher, dass für die Beobachtung politischer Geschäfte praxisnahe und massgeschneiderte Lösungen entwickelt werden, welche in der täglichen Anwendung überzeugen und technisch höchsten Ansprüchen genügen.
Ergänzend zu diesen laufenden Arbeiten im Rahmen der online-Datenbank arbeitet die polsan AG im Auftrag der SIK an einem Projektauftrag. Dieser umfasst die Funktionen und Schnittstellen von relevanten Datenbanken, welche die digitale Erfassung von politischen Geschäften auf den Ebenen Bund, Kantone und Städte betreffen. Im Rahmen dieser Zusammenarbeit mit ausgewählten Kantonen erhält die polsan AG Zugang zu deren umfassenden Datensammlungen innerkantonaler politischen Geschäfte.

Der POLITmonitor ist bereit, dem **Forschungsteam unter der Leitung von Prof. Dr. Alexander H. Trechsel für das Projekt "Digitalization and Political Concflict: Parties, Voters and Electoral Alignments (DIGIPOL)"** die Rohdaten aller erfassten Geschäfte aus dem Bereich Digitalisierung (inkl. Unterverstichwortung) für einen einmaligen Betrag von CHF 5'000 zur Verfügung zu stellen. Zudem ist eine vertiefte Analyse mit den umfassenden Datensatz von mindestens drei Kantonen möglich. Im Gegenzug erhält der POLITmonitor die im Rahmen dieses Projektes realisierten Forschungsergebnisse und Berichte. Falls das oben genannte Projekt realisiert wird, wird ein Vertrag zur Nutzung der Daten vereinbart.

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polsan
Büro für Politikanalyse
und -beratung

Mit freundlichen Grüssen

Yvan Rielle
Geschäftsführer

Andrea May
Projektleiterin POLITmonitor

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1. Further requested and available funds (not from the SNSF)

Other requested or available funding	no
comment	

2. Link to other SNSF projects

Link to other SNSF projets	no
comment	Currently, the applicant is conducting an SNSF-funded project entitled 'Media, Information consumptions, and politics' (MICaP, 2018-2021), which is still ongoing, and its results are expected to be published in 2021, after the data collection and analyses have been finalized. The project differs from the currently proposed study in various ways, including the subfields in which the two respective studies are situated. While MICaP is firmly rooted in political communication and political psychology, the proposed study departs from political sociology, and, more in particular, cleavage theory. While MICaP mainly studies the consequences of the changed media environment (media segregation) on voters' media consumption in relation to their attitude formation and political behavior, the proposed study investigates the consequences of digitalization from both the political supply- (political parties) and demand-side (citizens). As such, the media environment and citizens' media consumption are not part of the proposed study, while they are central to MICaP. The knowledge gained from the MICaP study are relevant and informative to the proposed project, which will lead to cross-fertilization between the two projects on a higher level of abstraction: both projects deal with different dimensions of the nexus between digitalization and politics. Next to MICaP, a short project is funded by the SNSF Spark scheme, entitled 'Algorithmic News Feed and Democracy', which investigates the impact of algorithmic personalized news feeds on democratic outcomes with a series of randomized controlled trials in the context of referendums. The project is situated in the same subfields as MICaP and starts in November 2020 and runs until October 2021. Both projects would have an overlap of maximum one month with the proposed project.

Digitalization and political conflict: parties, voters, and electoral alignment (DIGIPOL)

Data management plan (DMP)

1 Data collection and documentation

1.1 What data will you collect, observe, generate or reuse?

The data collected by this project will consist of three components: focus group data, quantitative survey data, coding of party manifestos (2015, 2019, 2023). The survey data consists of two waves that will be integrated in one dataset suitable for analysis with statistical software. The focus group data will consist of audio recordings and textual transcriptions of the discussions in the groups. More information on these data types is elaborated below.

1) The focus group data will consist of audio recordings and textual transcriptions of the discussions in the 4 groups.

2) The data collection for the original 2-wave survey will be coordinated with a commercial partner, Demoscope (https://www.demoscope.ch/ueber-uns/wer-wir-sind/), which is an experienced actor with an established track record of polling research in Switzerland. This will result in a dataset containing the two waves of the panel survey, in the form of structured (closed-form) CAWI interviews collected from a representative (stratified) sample of Swiss voters, which will be fully anonymized. The number of interviewed respondents for the second wave is aimed at 2,000, which was deemed to provide a sufficient statistical power with reasonable costs. The estimated dimension of the panel dataset will be a matrix with approximately 2,000 rows (participating subjects) and 200 columns (100 items per wave for two waves in wide format).

3) The manifesto data consists of the outcome of coding of the manifestos of Swiss political parties participating in the 2015, 2019, and 2023 federal elections. This will result in a dataset that has approx. 50 party-years in rows and the position on digitalization issues in the colums, that is currently estimated at max. 20 issues. This is used for the input of the VAA development, that is complemented with media analysis data and parties' self-positioning.

The last empirical component of the project consists of the analysis of roll-call votes and parliamentary proceedings that are available through parlament.ch, Curiavista, and POLITmonitor (through our partner Polsan). This is not technically data collection, but the data will be scraped to obtain the final text corpus to be analysed.

1.2 How will the data be collected, observed or generated?

1) The focus group data is transcribed into text by a research assistant, based on the audio recordings and their minutes during the focus groups. In these files, all information regarding the focus groups (time, place, participants' gender and age) is included.

2) The agreement with the polling partner Demoscope is to receive all the data in two separated files (one for each wave) with a respondent ID variable allowing to join the datasets. The survey respondents are completely anonymous to the research team because the contact with respondents is performed by Demoscope. We consider this as an important feature signaling the high quality of the interviews and as preserving the validity of survey responses. The polling partner (Demoscope) is responsible for the data collection process, as reported in the attached quote. The agreement satisfies the highest scientific and data-quality standards. In particular, Demoscope will be responsible for the data generation and

preprocessing, including: project management, scripting of the questionnaires, data mapping, pre-processing, data cleaning and errors' removal. All these tasks form the core expertise of Demoscope that has a proved record of previous collaborations with academic and public opinion researchers. The survey questions are closed questions and will make use of Likert scales. As such, the answers are standardized and comparable. After the second wave of the survey, this data will be merged with the datafile of the first wave, creating one harmonized file. Variable names are used consistently in the first and the second wave.

3) The manifesto data will be based on coding of manifestos by trained research assistants. They will code using Excel files that are standardized for the whole coding team. The main scientific collaborator overseeing the manifesto coding will harmonize these files into one statistical file suited for analysis using statistical software. This also provides the input for the development of the VAA. Coders make use of a pre-designed list of issues, but can also add issues which will be coordinated with the other coders.

4) Parties' self-positining, used for the VAA, is collected by contacting political parties with the request to position themselves on the list of policy issues.

All files will be saved at the university server. The PI, main scientific collaborators and the research assistant(s) have access to the screen recording and focus group files and will use their initials to indicate having edited an existing file. The survey datafiles are not shared with anyone else than the PI and the main scientific collaborators.

1.3 What documentation and metadata will you provide with the data?

The data is provided together with a data map containing all relevant metadata (clarifications, notes, and documentation for each of the three datasets). Each dataset will also be accompaigned by a methodological note providing revelant infrormation regarding the data generation. Each of the three datasets is provided with complete metadata indicating their unique persisent identifier (PID), the references to Demoscope (if appplicable) and the research team, and the dates and place of data collection.

1) The focus group data will be accompanied with the following information provided by the PI:
- name of the PI and the affiliated university
- DOI of the dataset
- purpose and aim of the research project
- time of data collection
- mode of data collection
- procedure regarding respondents’ recruitment and compensation

2) In case of the panel dataset, the sample is obtained via random sampling, but by stratification by language region of Switzerland. A second methodological note will also be released to fully account for the randomized treatment assignment of the survey experiment. Taken together, the survey data will be accompanied with the following information:
- name of the PI and the affiliated university
- DOI of the dataset
- purpose and aim of the research project
- time of data collection
- mode of data collection
- codebook with all survey questions and variable names
- procedure regarding respondents’ recruitment

3) The manifesto data and other data collected for the VAA input will be accompanied with the following information provided by the PI:
- name of the PI and the affiliated university
- DOI of the dataset
- purpose and aim of the research project
- coding procedure

2 Ethics, legal and security issues

2.1 How will ethical issues be addressed and handled?

Sensitive data is collected in this project regarding political ideology, vote choice, and political participation. All data is anonymized and only identifies participants and respondents by their PID. Participants will be asked for their consent regarding data processing and being contacted again (in case of the survey). Participants are free to stop participation in the study at any time.

The collaboration with Demoscope is based on the highest standards of data and participants' protection. 1) Regarding the survey: the research team will be completely blind to the identity of the respondents, whose confidentiality is protected by Demoscope. Respondents's identification relies fully on the PID numbers which is used to merge the two waves of the data. Respondents to the survey are asked to their consent to the processing and analysis of their data, and are informed about the procedure. They are asked whether they want to participate in the second wave of the study, if they do not give their consent to be contacted again, they will not be.

2) Regarding the focus groups: the research team will be completely blind to the identity of the respondents, whose confidentiality is protected by Demoscope. Upon completion of the focus groups, no personal information is stored anymore about the participants by the PI or other members of the research team. The transcriptions of the focus groups will not contain any reference to individuals and will ensure that participants are unable to be identified. At the start of the focus groups, participants are informed about the procedure and will be asked to sign consent forms regarding the anonymous processing of their data.

All datasets will be stored at the university server. This will be the anonymized versions of the datasets that do not contain any personal information that can be traced back to individuals.

2.2 How will data access and security be managed?

The complete anonymity of the datasets limits the risks of sharing sensitive information. Data security is enforced by the agreement with Demoscope, which is contractually bound to share the data uniquely with the project leader.

With regards to the data from the survey, the research team will only have an anonimyzed dataset and no personal information of the respondents, and therefore the data cannot be traced back to any individuals. The research team will not handle contact information of the participants to the surveys and of the focus groups.

However, it is still important that the dataset is not accessed by any others than the research team. To this end, the dataset will be only stored at the university server in a folder that only the research team can access. A back-up is automatically made on the university server. The project leader will only hare the data with project employees and collaborators under a strict non-discosure agreement.

2.3 How will you handle copyright and Intellectual Property Rights issues?

The project will be the owner of the data generated by this project. However, we will put all the anonymized data used for our scientific purposes into a corresponding dataverse repository for free access, such as FORSbase. Upon its deposit in FORSbase, users are asked to sign a license agreement in order to download the data. No commercial use will be made of this data generated by the project.

3 Data storage and preservation

3.1 How will your data be stored and backed-up during the research?

Our data storage will take place within the IT structures of the University of Lucerne.

3.2 What is your data preservation plan?

The dataset resulting from the survey, and the text files from the focus groups, and the parties' positioning will all be made available upon completion of the research project. All data files used for the preparation of scientific output published in journals, books and other public forms of publications will be put into corresponding, publicly accessible data repositories at the time of publication.

In order to preserve these datasets in the long run, the files are deposited in FORSbase who will take care of the long-term preservation of the data. The experiment and survey datasets will be deposited as Stata, SPSS and R datafiles. As regards the focus groups data, we will need to discuss with FORS regarding their newly to be developed principles regarding qualitative data.

The personal information retained by Demoscope will be destroyed upon completion of the project.

4 Data sharing and reuse

4.1 How and where will the data be shared?

We will share the datasets on FORSbase. The metadata will contain all relevant information about the data which enables other researchers to find out data.

Publications of the research team making use of the data will refer to the DOI of the dataset in FORSbase, and other researchers who will make use of the data after completion of the project, will be asked to do the same.

4.2 Are there any necessary limitations to protect sensitive data?

The data will be made available upon completion of the project and the corresponding publications. The shared data will not contain any confidential information.

4.3 All digital repositories I will choose are conform to the FAIR Data Principles.

Yes

4.4 I will choose digital repositories maintained by a non-profit organisation.

Yes