



ESS ERIC DELIVERABLE

ESS ERIC WORK PROGRAMME 01 JUNE 2019 – 31 MAY 2021

DELIVERABLE NUMBER: 11.8

DELIVERABLE TITLE: **ESS annual bibliographic report 2019**

WORK PACKAGE Number: WP11 (Science communication and academic impact monitoring)

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DISSEMINATION STATUS: Open

SUBMITTED: 13 December 2019

ACCEPTED: 15 January 2020

European Social Survey academic impact monitoring
Annual report 2019

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Aims, methods and content of the report

In order to evaluate ESS academic impact, guide its questionnaire design and refinement, inform its outreach and communications actions and similar, ESS needs continuous and detailed feedback about its academic use. Bibliographic monitoring is the main **self-observation tool** to obtain such information. It provides:

- Empirical evidence on the scope, geographical and disciplinary patterns of ESS academic usage, theory development and policy references;
- Support for informed decision-making of the ESS bodies (CST, SAB and QDTs) concerning the questionnaire content (item and modules selection and revision), targeting training and communication strategies and similar.
- Summary bibliographic reports, statistics and tailor-made lists of citations that help demonstrate ESS academic relevance to European and national funders and users.
- Bibliographic repository for other work packages to be used for methodological testing, updating of ESS online bibliography, as well as to support ESS communication actions and produce relevant outreach materials.

The 2019 annual bibliographic report (Deliverable 11.9) includes publications for the **period 2003-2018**, as identified by the Google Scholar indexing tool (see Nederhof, 2006; Mayr and Walter 2007; Ware and Mabe, 2012). In the past reports the key phrase '*European Social Survey*' was searched for in the texts or abstracts to identify relevant publications. However, in the last few years the number of English language hits seemed to have exceeded the Google Scholar limit of 1,000 displayed publications. In order to overcome this issue, as well as to obtain a more precise search algorithm in terms of ESS data use, additional keywords were introduced this year. The exercise resulted in 513 relevant hits for the publishing year 2018, out of which 173 or 34% were (uniquely) based on the new keywords, among which 'round' and 'wave' proved particularly useful. Considering this favourable outcome the improved search pattern will be applied routinely in the future reports.

Across the report, an **ESS-based publication** is defined as any academic publication in English language: journal article, book, chapter, published conference or research paper. It can either be 1) methodological, or 2) substantive, with at least one ESS item used in **primary analysis**. Accordingly, the relevant universe does not include ESS based publications in other languages or substantive publications using European Social Survey keyword without primary data usage (e.g. publications that report replicating ESS items, secondary citations of ESS data and similar). Annually, approximately 950 English language publications containing search keywords are reviewed case-by-case to confirm primary ESS data use. About 60% of the original Google Scholar hits are discarded through this process due to irrelevance or duplication. With the inclusion of the publishing year 2018, the combined number of ESS based publications and presentations has reached 4417.

Contents

The 2018 ESS annual bibliographic report includes the following sections:

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1 ACADEMIC COMMUNITIES

1.1 ESS academic publishing scope and trend

Supporting academic communities and their analytical efforts is one of the key performance indicators for social science research infrastructures. In the academic world the success of this support is best reflected in the number of academic publications generated by a given project. As noted in the introduction, the overall number of English language ESS-based publications identified via Google Scholar is now **4417**¹, with 2211 of them being articles in peer-reviewed journals (Figure 1).

In terms of monitoring the **ESS publication trend**, journal articles are the most reliable category, with about 95% of them being accessible from Ljubljana University IPs. On the other hand, there is a selection bias for all other publications with the exception of working papers (e.g. conference papers, books and chapters or student theses) which are only included if full texts are available. Accordingly, the actual number of ESS-based English language publications is in fact (much) larger, particularly in the category of books, chapters and theses.

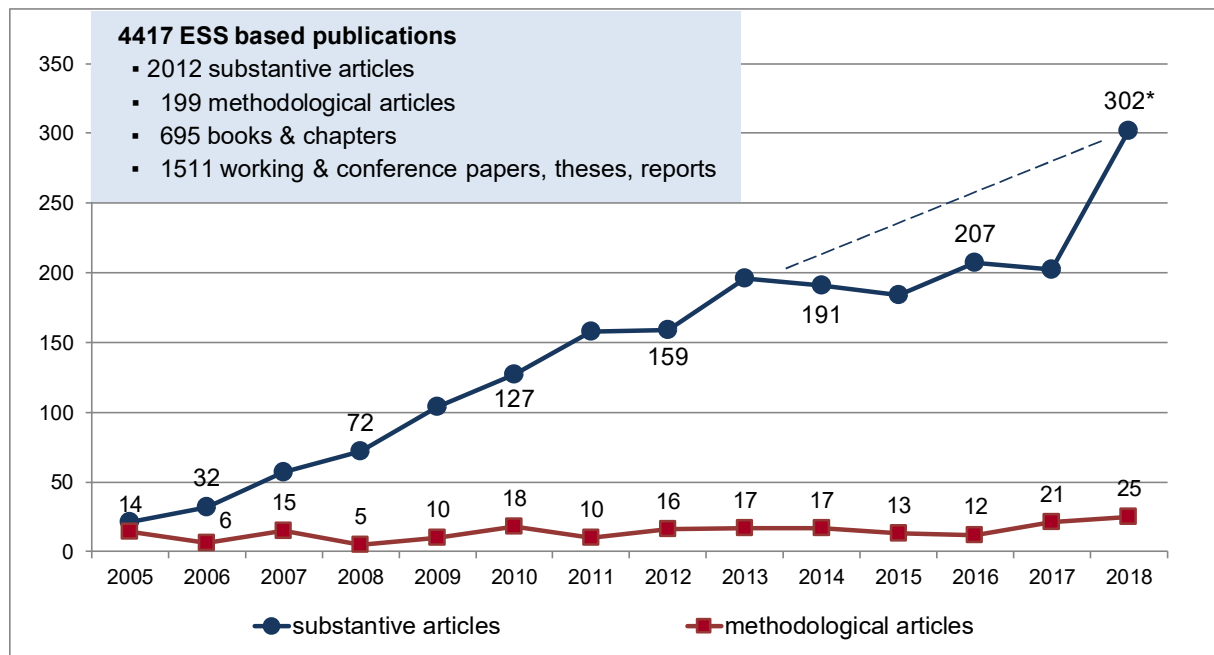


Figure 1: Trends in ESS academic publishing in the 2006-2018 period (N=4417)
 (* new search algorithm applied for the publication year 2018)

Figure 1 presents the cross-time publication trend for ESS journal articles and confirms the **trend is upward**. It also reveals the failing performance of the original search algorithm which seemed to have left undiscovered a certain number of journal articles and other publications in the 2014-2017 period (below the dotted line). The new, more precise algorithm has thus produced a significant increase in the number of substantive journal articles found in 2018, as compared to 2017. The obvious positive implication is that now a

¹ The comprehensive list of 4417 citations sorted by publication type is available in Appendix 1

more accurate and valid trend picture was obtained and more publications are available for bibliographic coding. In contrast to substantive articles, the trend of methodological articles is rather stable, apparently reflecting capacity limitations of the social science methodological community.

Despite the numerical and scientific dominance of journal articles in most of the academic world and particularly in academic evaluation exercises, ESS bibliographic monitoring also documents a large number of books, chapters, working and conference papers and theses. These might become more relevant in the future when ESS will be subject to ESFRI evaluations where attention to other types of publications was explicitly highlighted in the discussions on the future key performance indicators.

1.2 Disciplinary profile of academic users

The spread of ESS articles across academic disciplines is another indicator of ESS dissemination performance and infrastructural role. As in previous reports, we use **journal disciplinary field** as a proxy measure to assess ESS outreach into academic communities. As a rule, academic journals are profiled, publishing scholarship relating to a specific academic discipline. As such, they provide a rough but relevant estimate of the academic structure of ESS users (Figure 2).

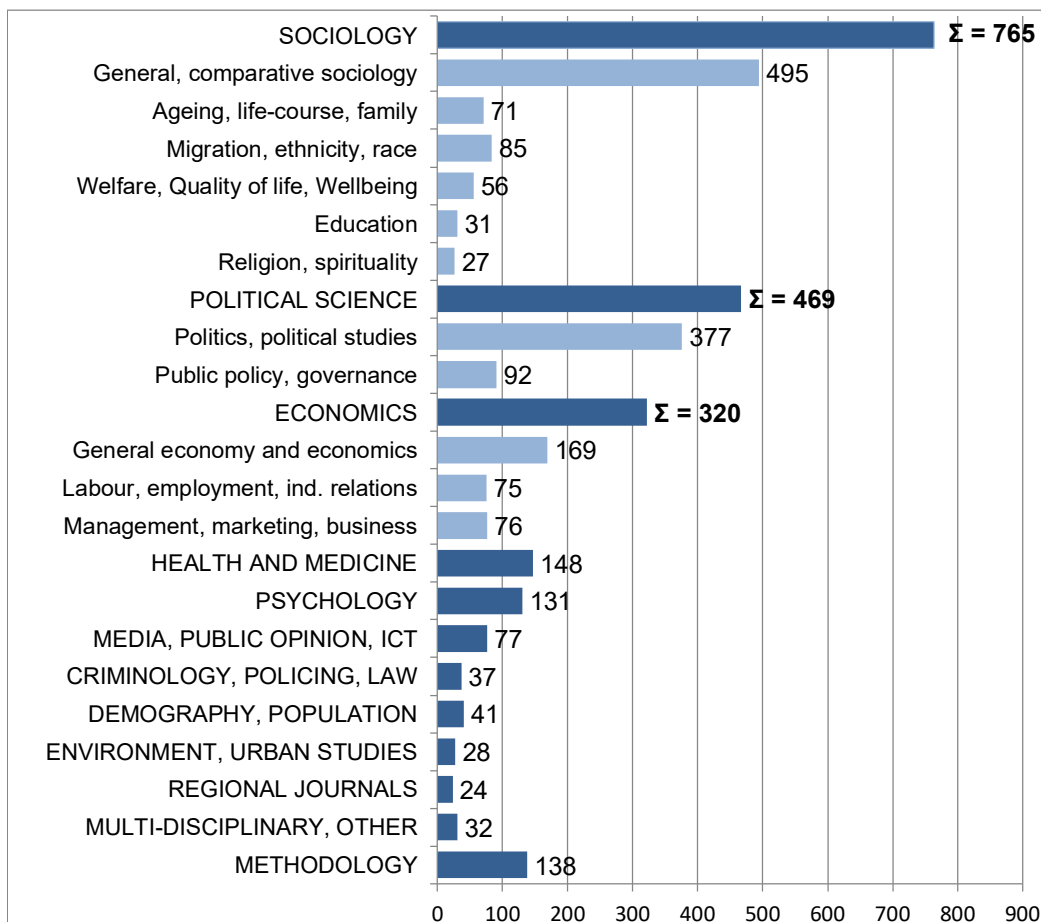


Figure 2: ESS outreach into academic fields. Based on journal typology in the 2003-2018 period (N=2210)

In past reports, ESS was found to support a variety of academic disciplines and, based on journal profiles, there are the six scholarly fields where ESS based analyses appear most frequently, starting with sociology (34.6%), political science (21.2) and economy (14.5), followed by health & medicine, psychology and methodology. The chart also reveals a more a detailed structure of academic **sub-disciplines** within the three largest fields. In addition to general profile sociological, political science and economics journals – where they are by far the most numerous – ESS articles frequently appear in migration journals, policy journals, labour market and management journals, and others.

As shown by Figure 3, ESS publishing history is divided into two periods, the grand division between ESS academic user groups seems to be fairly **stable over time**. There seems to be a small decrease in the number of articles published in sociological journals and an increase in some other fields, e.g. political science, economics and health, but the shifts do not radically change the overall picture.

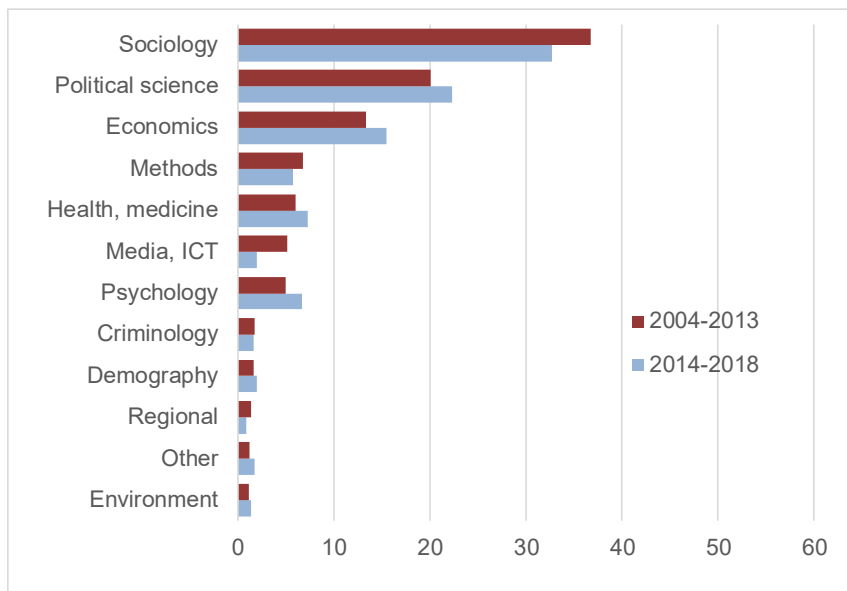


Figure 3: ESS journal articles typology in two time periods (N=2210)

It is likely that this pattern is to a large extent **contextually determined** by factors such as the structure of European and global social science academic communities, the standard issues they typically address and ESS questionnaire content itself, particularly the stability of the Core module, the most used part by far. A major disruption would have to occur for this picture to change more significantly, yet moderate shifts between disciplines can be caused by grand societal events or processes, as well as new questionnaire content generated by the ESS, covering previously little engaged academic communities. The Climate change module may present such an opportunity, as well as the forthcoming digital networks module.

2 RESEARCH TOPICS

Both the structure of academic communities and the structure of topics addressed by ESS authors provide information on the key social areas where ESS is contributing most to the knowledge production and informing policies. Nevertheless, the picture of topics more closely **reflects social issues** typically addressed by scholars in the disciplines ESS has engaged. It may also ‘highlight’ (by their absence) important social issues which are missing from the picture such as, until recently, climate change.

The first thematic division is between substantive and methodological topics. Among the 4417 publications, **86.0% (3798) are substantive and 14.0% (619) methodological**. The methodological share is lower for journal articles (9.0% or 199 articles), reflecting the fact that a relatively large part of methodological publications are conference presentations at methodological events and conferences. Adding to this broad division, Figure 4 presents a summary picture of substantive research topics most frequently investigated by ESS based authors. Up to two topics are routinely coded for each publication.

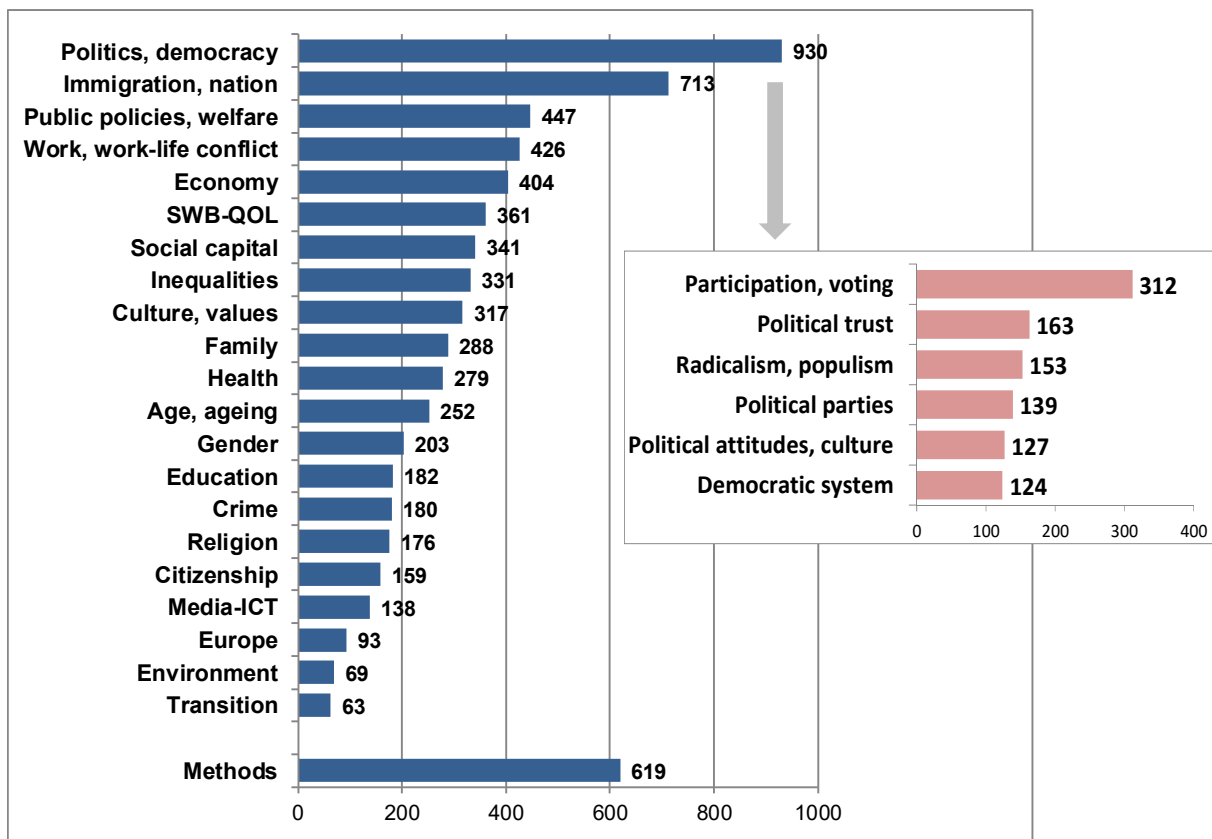


Figure 4: Number ESS publications addressing individual topics (up to two topics coded per publication, 2003-2018, N=4417)

We can assume that an individual ‘model’ of research topic selection usually involves social and theoretical relevance of an issue and is, as such, to a large extent dependent on researchers’ societal context (within the general framework of the questionnaire content). Accordingly the structure of topics provides an interesting insight into the weight of specific social areas and issues that are explored and therefore, indirectly, the areas where **key**

societal challenges emerge. Traditionally, the two topics that are most frequently explored by ESS based authors remain politics, with the widespread exploration of the functioning of modern democratic systems, and immigration, a pressing social issue facing European countries with capacity to transform societies' political, economic, social and cultural life. Other big topics include public policies, welfare, work-life conflict, macro-economic conditions and their implications (e.g. The Great Recession), social capital with citizenship and civic society, culture and norms, family planning and work division, health determinants and health inequalities and other.

The picture is quite relevant, but has its limitations for monitoring ESS academic impact, in particular from the aspect of theory development. Therefore, to complement topics and journal communities coding and better triangulate ESS academic impact, theory mapping was introduced for the first time in the 2019 bibliographic report.

3 THEORY MAPPING

While journal and topics mapping has been used in ESS bibliographic reports to identify academic user communities and main subject areas, the aim of theory mapping is to identify specific ESS contribution to theory development. Topics mapping is rather broad, particularly in the areas with massive research outputs and, most importantly, can provide only indirect evidence of ESS theoretical contribution. That is, theoretical impact is basically implied from the fact that scientific publications are theory based. Besides this general assumption ESS could so far not present a more detailed and specific picture of its theoretical influence, which could become problematic in the near future when ESS ERIC and other landmark will regularly undergo ESFRI evaluation exercises. Supporting theory development and providing causal explanations on social processes is considered one of the key elements of scientific contribution, i.e. one of the key 'performance indicators'. This, as well as the internal relevance of obtaining the picture of ESS theoretical influence (CST, SAB, GA) were the key rationales for launching the theory mapping exercise.

3.1 The method

In order to obtain the initial list of concepts, theories and theoretical approaches that appear in ESS publications, **2800 downloaded substantive publications were keyword searched** for the word "theory", as well as a number of individual theoretical concepts. In the next step the presence of a concept or theory was **quantified** by running a large number of specific searches (keywords or key-strings) that could identify the presence of a theory or a concept in the texts. If the keyword(s) only appeared in the references section, the publication was excluded from the count. The final quantitative picture may not be completely accurate, as some variations could have been missed, but is certainly robust enough to provide a good estimate of which theoretical concepts and perspectives are most often employed when using ESS data and what their relative importance is.

3.2 Results

ESS based theoretical explorations are scattered across a variety of social science fields. Given that this is the initial exercise in theory mapping, this section presents a rather detailed overview of the most frequently used theoretical concepts and theories across most of them. It is meant to be reviewed and drawn upon by various ESS ERIC bodies or individuals faced with the need to either examine or demonstrate ESS theoretical contributions. As mentioned, the usage is quantified, with the numbers in the brackets representing the **number of publications where a concept or theoretical approach was referred to in the text at least once**. In the narrative that follows we outline the use of the majority of concepts and theories, except for the more marginal ones. The full list is available in Appendix 3.

Politics

As can be concluded from the topics chart, politics is the most explored subject in the ESS literature, involving a number of theoretical approaches, concepts and theories. In terms of subject matter the most numerous are references to ***Political parties (732)***, the key-agents for political aggregation of interest. Here analysts address a variety of issues, such as membership trends and profile, ideological position, anti-immigrant rhetoric, populism. Among the most frequently analysed theoretical concepts are: ***Political trust (307)***, the embodiment citizens' confidence in political institutions and an important indicator of political legitimacy; ***Political elites (279)***, powerful groups with disproportionate control over political and economic resource; ***Political culture (241)***, sets of attitudes, beliefs and sentiments that provide underlying assumptions and rules to any political system; ***Political responsiveness (163)***, a relationship between political agents and public opinion that conceptualizes to what extent preferences of citizens are reflected in policies and politics; ***Political efficacy (162)***, citizens' trust in government and their belief that they can understand and influence political affairs. A much referred to subject is ***Political and public corruption (400)*** as the abuse of power for private gain, its causes and effects on institutional trust, relation to political culture in terms of corruption permissiveness etc. This is interesting because ESS corruption items from the *Economic morality of Criminal justice* modules do not demonstrate heavy usage. The main analytical format seems to be taking the Transparency International Corruption Perceptions Index and using a variety of ESS indicators to investigate the societal implications of corruption, or explore political, cultural and societal background for-cross country differences in corruption levels.

There is a large body of ESS literature containing theoretical explorations of conventional and non-conventional ***Political participation (518)***, particularly elections. The most frequently found was the ***Median voter theory (104)*** which states that a majority rule voting system will select the outcome most preferred by the median voter. The ***Economic voting theory (44)*** states that voters in Western democracies tend to 'punish' their governments in times of unemployment, inflation or low GDP growth while ***The theory of partisan (electoral) de-alignment (28)*** outlines the process where a large portion of the electorate abandons its previous partisan affiliation. Other theories ESS authors used to explain voter's behaviour include ***Valence theory (25)***, ***Protest voting theory (23)***, ***Second-order election theory (19)*** and a few more.

The concept of non-conventional political participation was captured by references to **Social movements** and **Political protest (265)**, a civil society activity aiming to solve various collective action issues, with analysts often exploring to what extent economic grievances function as an incentive for political engagement. With respect to political ideologies, both **Right-wing (466)** and **Left-wing (304)** parts of the spectrum are frequently referred to in the text, but there is a much stronger emphasis on the **Radical right (295)** than **Radical left (101)**, with particular salience of the issue of **Political populism (317)**, an ideology which presents “the people” as a morally good force while it portrays “the elite” as corrupt and self-serving. Another theoretically dynamic area is the disputed democratic role of **mass media** with leading approaches being the **Agenda setting theory (45)**, **Social learning theory (34)**, **Knowledge gap theory (20)** and **Media malaise theory (19)**. The theories seek to explain political implications of media consumption such as effects on social and political trust, fear of crime, political participation, political knowledge, political socialization, alienation, cynicism, anti-immigration attitudes and others.

Citizenship

A closely related area is citizenship, with the omnipresent concept of **Social capital (665)** (Bourdieu, Putnam) and its associated concepts of **Social networks (482)**, **Social trust (388)**, **Civil society (358)** and **Social cohesion (280)**. Social capital as a combination of generalized trust and access to social networks is repeatedly found to correlate with many features of liberal democracy, such as functioning of democratic institutions, increased levels of citizens’ participation and better performance in several policy areas. Social capital and its outcome in the form of social cohesion are viewed by most analysts as the key determinant of ‘healthy’ societies, democracies and communities. Aside these grand concepts, the most referred to theoretical approaches in the area of citizenship include **Marshall’s theory of social citizenship (50)**, **Social contract theory (50)** and **Distributive justice theory** by Rawls (47), which all promote the idea that democracy should not be limited to purely political rights, but should also include an emphasis on social rights.

Welfare

A large number of publications contain references to the concepts of **Policy-making or public policies (411)**. There is in fact an even larger number of publications (77%) where the keyword ‘policy’ is present, but in this case the references are closer to exploring the policy-making process as a theoretical subject. Authors theorize about evidence based policy making, Europeization of policy making, policy-making elites, public opinion influence and other. By far the most salient single theory in the area of welfare is Esping-Andersen’s **Theory of welfare regimes (329)**, which classifies contemporary Western welfare states into three ‘worlds of welfare’ and postulates that existing welfare regimes act as socialising forces that reproduce the demand for redistribution that legitimises them. Other approaches include **Welfare deservingness theory (52)**, **Resource theories (43)** **Policy feedback theory (24)** and a macro-economic **Varieties of capitalism theory (39)**. Another often referred to concept is **Welfare Chauvinism (56)**, a belief that immigrants are “free-riders” who receive social benefits without having contributed adequately via taxes.

Social inequalities

Among the social inequality concepts the most referred to is **Social class (429)**, a set of concepts deriving from Marxist, Weberian and more recent approaches such as the **Erikson–Goldthorpe-Portocarero (113)** occupational class scheme. Other key theoretical concepts include **Social inequality (305)** commonly defined as unequal distribution of income or wealth and interpreted in either functionalist or conflict perspective; **Social exclusion (278)** or social marginalisation of various groups who are denied full access to various rights, opportunities and resources; **Social mobility (169)** or the movement of individuals or other categories within or between social strata. These well-established approaches are complemented with more specific theories about social inequality, its reproduction and perceptions, such as **Social closure theory (31)** and **The theory of inequality aversion (17)**.

Economics, labour

In the area of economy and labour market the most salient concept by far was Becker's **Theory of human capital (443)**, the most influential theory conceptualising education and its individual and social role, using it as a predictor for individual's productivity. Another widely used approach is the **Rational choice theory of economic behaviour (140)**, also used in welfare research and other fields, which postulates that individuals make rational choices that result in outcomes that serve their own best interests. A frequently analysed concept is **Entrepreneurship (92)**, usually in relation to its cultural and psychological determinants, dimensions that are well covered by ESS questionnaires.

In the area of industrial relations the subject of **Union membership (68)** is often explored, a collective bargaining mechanism that increases the bargaining power of employees. Analysts investigate its macro and micro determinants, with most frequent theoretical approaches being the macro **Employment regime theory (26)**, or a micro-level theory such as **Social custom theory (11)** which postulates that trade unions produce social norms that pressurize employees into membership. Among theories of wages, the most referred two are **Compensating differentials theory (41)** which analyses the additional amount of income that a worker must be offered in order to motivate them to accept an undesirable job and **Insider-outsider theory (41)** which postulates that legislation to protect employment of current workers undermines the opportunities of new workers to obtain secure employment.

Well-being

In ample ESS-based investigation of Well-being, the most frequently detected concepts were **Subjective well-being (369)** as a self-reported measure typically obtained by questionnaire and **Quality of life (368)** as the general well-being concept of individuals and societies. ESS authors typically explore well-being determinants such as age, illness, immigration status, peer comparisons, welfare regime, social capital and networks, trust levels, economic resources and others. Among the well-being theories used to explain cross-time and cross-country differences, the most frequently found was psychologically based **Social comparison or reference group theory (95)**, according to which people's understanding of themselves is

not context free, but is based on how people compare their situation with that of others, or to their previous situation. Another strong group are Hedonic adaptation theories such as **Easterlin Paradox (42)**, **Set point theory (17)** and **Hedonic-treadmill theory (15)** which all observe a tendency of people to quickly return to a relatively stable level of happiness despite major positive or negative events or life changes. As such they also point out the limitations of policy intervention in human happiness.

A much explored concept in the well-being area is socially produced **Inequalities in health** (Wilkinson) **(113)**, underlined by the **Social stress theory (19)** of health according to which inequality itself has a detrimental effect on the health of people who live in more unequal societies. The concepts of **Mortality (261)** and **Morbidity (110)** are frequently referred to in connection with social exclusion, social isolation, class-differences, employment status, social policies, life-style, regional and cross-country differences (East-West), corruption and others. Of particular interest is, in Durkheimian tradition, **Suicide rate and mortality (100)** and its social determinants such as social capital, social isolation, unemployment and minority status and others.

Immigration

Immigration is, of course, one of the flagship areas of the ESS based research. A wealth of longitudinal indicators and large combined sample sizes offer ample opportunities for theory development and testing. ESS authors would often test 'competing' theories in various country and regional contexts. The search identified a large number of references to **theories explaining inter-group relations (788)**, originating largely from psychological research. The most frequent approach is Allport's **Intergroup contact theory (123)**, according to which personal contacts between natives and foreigners are likely to decrease negative attitudes and prejudice, especially if the nature of contacts is positive. Equally widespread is the **Social distance theory (119)** which is based on the notion of social distance between different groups in society, i.e. nearness or intimacy that an individual or group feels towards another individual or group. Blumer's **Group Threat Theory (117)** maintains that because of the actual or anticipated negative consequences in-group members would develop negative attitudes toward out-groups and seek to deny them equality of treatment. Tajfel's **Social identity theory (98)**, maintains that group membership generates positive emotions of belonging to the in-group (nurturing a collective positive self-image), but leads to sentiments of superiority and derogation over those who are not in the group. **Conflict theory (93)**, **The theory of ethnic competition (59)**, **Self-interest theory (20)** and **The realistic conflict theory (18)** predict that intergroup tensions will occur whenever social groups must compete for scarce resources. A typical example is an increased share of immigrants that should negatively influence natives' opinion about ethnic minorities because it threatens their economic position, particularly among the low-skilled groups. **Scapegoating theory (47)** refers to the tendency to blame someone else for one's own problems while maintaining one's positive self-image. E.g. migrants have been widely scapegoated by far-right parties as posing direct competition for jobs. **Neighbourhood safety theory (21)** argues that it is not simply the proportion of immigrants that explains anti-immigrant hostility, but the rapid influx of ethnically/racially different migrants into a previously homogenous region. Other theoretical approaches ESS based authors use in immigration research include **The theory of group dynamics (17)**, **The theory of symbolic**

racism (13), **Cultural affinity theory (12)**, **Cultural marginality theory (11)** and **The theory of ethnic boundary-making (6)** and some others. In addition, the general concept of **Ethnic discrimination (94)** is referred to frequently in the texts, denoting subjective experience of being treated differently because of one's ethnic characteristics.

Besides intergroup relations, many authors address the subject of **integration of immigrants** into host societies. The leading approach is the **Theory of (segmented) assimilation (203)** which, in its classic version, sees immigrant and majority groups 'converging' over time, i.e. becoming more similar in norms, values, behaviours, and characteristics. The segmented assimilation version suggests different immigrant groups assimilate into different segments of society. **Acculturation theory (83)** also predicts that the process of cultural change occurs when individuals from different cultural backgrounds come into prolonged contact with each other. Another widely cited concept is **Multiculturalism (159)**, a non-assimilative approach to cultural diversity where members of different cultures are supposed to be able to live peacefully alongside each other. All in all, the theory mapping emphatically demonstrates that ESS is making an essential contribution to theory development in this critical area of social research.

Culture and values, religion

The leading concept in the area of culture and values is **Social norms (383)** as informal understandings that govern the behaviour of members of a society. ESS authors investigate the mechanism of social norms across a number of disciplines and subjects, such as gender and family norms, fertility norms, norms of volunteering, norms of political engagement, work and employment norms, tax morale, as well as transmission of norms, informal control, peer pressure and other. Equally abundant is the concept of **Socialization (369)**, the process of internalizing the norms and ideologies of society. Among cross-cultural value theories the most frequently used is Schwartz's **Theory of Basic Human Values (84)** that aims to measure ten universal values that are recognised throughout all major cultures. The Human values questionnaire is part of the ESS core and therefore individual items from it (taken out of theoretical context) are used in many more publications. The second is **Hofstede's cultural dimensions theory (66)** which identifies five universalist cultural dimensions.

Cultural change is another major area of research. Beck's **Individualisation thesis (149)** hypothesized that in contemporary societies individual's identities are becoming less bound by collective identity, individuals are free to continuously redefine their identity and lifestyles. The **Post-materialism theory (122)** and concept popularized by Inglehart predicts the transformation of values from materialist and economic to new individual values of autonomy and self-expression. **Social disintegration (anomie) theory (81)** combines Durkheim's notions of anomie with a perceived lack of integration into societal institutions and the erosion of traditional social cleavages, a popular explanation for the rise of radical right and xenophobia. A related newly emerged theory is the **Cultural backlash theory (12)** which theorizes that the spread of progressive values and immigration flows has stimulated a cultural backlash among people who feel threatened by this development.

Religion, a sub-area of cultural change research, is theoretically dominated by the **Secularization theory (175)**, a notion that as societies progress and modernize religious

authority diminishes in all aspects of social life and governance. The theory continues to be tested and is often criticized for being ‘Eurocentric’, as religion meets essential human needs and therefore the demand for it remains constant. This is argued by **Religious market theory (17)** which postulates that by offering an array of religions and religious products, a competitive religious economy stimulates religious activity.

Family, gender, age groups

Family research focuses primarily on **Work-life balance (134)**, a long tradition of research on attempts to manage paid work along with family and other parts of life. A closely related concept is **Gender roles (232)**, a range of behaviours and attitudes that are generally considered appropriate or desirable for people based on their sex. According to Parsons, a family based on the division of “sex roles” is optimal for societal stability, normal birth rate and children upbringing and ESS authors often test the validity of this traditional view. Related concepts include **Gender inequality (156)** and **Gender discrimination (43)** which are used to investigate gender-based disparities, particularly in the area of education, paid work and household work. A clear deviation from traditional family roles is **Same sex partnership (65)** which is often investigated by ESS authors in the context of normative acceptance of new family forms.

Demographic issues are a linked area of research, particularly the issue of **Fertility (241)** and fertility decisions, often within the framework of the **Life course perspective (260)**. In the context of ageing societies, a number of theories were developed to understand population trends at the individual level. The most frequently found theory in ESS publications is **(second) Demographic transition theory (63)**, which refers to the historical shift from high birth rates and high infant death rates in societies with minimal technology and education, to low birth rates and low death rates in economically advanced societies. The second demographic transition predicts that normative changes in the direction individualization will result very low fertility and a diversity of union and family types. In terms of individual fertility decisions, a number of theoretical approaches are informed by the ESS data, the leading ones being **Gender equity theory (29)** which argues that that low fertility emerges where many women no longer perceive the prevailing cultural-institutional gender context as being fair, and **The theory of planned behaviour (28)**, which aims to explain and contextualize individual-level fertility decision with respect to normative environment, peer pressure, varying levels of individual control and similar.

An issue connected to demographic transition is the process of **Ageing (205)** and its societal implications in terms of demographic structure, workforce, party membership, ageing electorate, welfare sustainability and others. ESS ageism module, but also other indicators, support theoretical explorations of **Ageism (41)**, the discrimination against individuals or groups on the basis of their age.

Criminology

In Criminology the most frequently discovered theoretical concept was **Procedural justice theory (47)**, which was also the theoretical background for the ESS Criminal Justice module. It argues that public perceptions of the fairness of the police are a key factor in

determining the level of cooperation with the police and compliance with the law. Other theories seek to explain the motivations for criminal behaviour, the most frequent being **Social disorganization theory (11)** which links crime rates to neighbourhood ecological characteristics such as social disorganization and lack of effective social control.

Psychology

As already noted, a number of psychological theories are used across a number of research fields, such as inter-group relations theories in immigration. Other frequently used psychological theories that appear across different topics in ESS publications include theories of social behaviour and learning, e.g. Festinger's **Cognitive dissonance theory (59)**, Goffman's **Stigmatization theory (57)** and Maslow's **Hierarchy of needs theory (17)**.

Theoretical paradigms and events

As to grand theoretical paradigms not many authors refer to them explicitly and they are therefore not easily identified by the keyword search. Nevertheless, among those that are mentioned the most frequent ones are **Feminism (90)** and **Marxism** with **Critical theory (79)**, while **Functionalism (37)**, **Constructivism (23)**, **Interactionism (18)** and **Positivism (18)** are referred to less frequently. This may also be due to proponents of some paradigms being more likely to explicate their theoretical stance.

Events

Finally, the mapping exercise investigated references to three 'grand events' or processes. The aim was to assess the capacity of the ESS instrument and analysts to investigate their social, economic and political consequences, generate theoretical explanations and inform policy-makers. The three events examined were global financial crisis, terrorist attacks and European integration with Brexit.

Global financial crisis (283) is referred to in many ESS publications, with authors addressing, among many others, the issues of youth unemployment, the rise of social movements, the rise of radical right, the decline of political trust, the pressure on informal caregiving and the post-crises weakened welfare state. In case of **Terrorist attacks (133)** analysts explore their effects on electoral results, immigration policy preferences, sense of cultural threat, Islamophobia, the rise of surveillance state and others. **European integration (167)** and **Eurocepticism (80)** are also much explored subjects, with analysts investigating the determinants of public support for European integration, public knowledge on it, the issues of integration being an elite-driven process with democratic deficit, the effects of common market, the politicization of integration by (populist)political parties, the level of European identity and others. **Brexit (62)** references have appeared rapidly after the 2016 referendum and are expected to further expand in the next few publishing years. In relation to Brexit scholars typically analyse global populist surge, anti-establishment discourse, anti-immigration rhetoric, EU policy mistakes, urban-rural divide, economic grievances, revival of nationalism and others.

Summary and evaluation

Box 1 summarizes the **main areas of ESS based theoretical explorations** and theory development. As noted, the overview should have both internal and external value. Internally, it provides ESS with a better insight into its theoretical power, it should also make questionnaire construction and revisions more informed by linking individual items and batteries to theoretical usage. Externally, it illuminates the sizable contribution ESS as a scientific infrastructure is making to theory building and knowledge production. It also identifies potential for theoretical meta-analyses in the manner of medical studies, particularly in the areas of immigration and politics. The ESS 'theoretical map' will be updated and likely expanded in future bibliographic reports.

Box 1: Main areas of ESS based theory development* (N=2800 ESS substantive publications 2004-2018)

POLITICS		IMMIGRATION	
The theory of political culture	424	Intergroup relations theories	788
Theories of voting behaviour	302	Integration, assimilation theories	294
Theories of system support	176		
Mass media theories	156	ECONOMICS	
Theories of collective action	81	Human capital theory	443
		Theories of economic behaviour	185
CITIZENSHIP		CULTURE, RELIGION	
Social capital theory	665	Theories of cultural change	562
Theories of citizenship	162	Human values theories	150
WELFARE		OTHER ACADEMIC FIELDS	
Theories of welfare regimes	368	Gender role theories	232
Theories of welfare attitudes	175	Social stratification theories	227
		Well-being & happiness theories	204
LABOUR MARKET		Theories of social behaviour	163
		Theories of fertility behaviour	135
Wage segmentation theories	104	Crime and justice theories	68
Unionization theories	45		

* Number of ESS publications where a theoretical approach is referred to at least once

4. MULTILEVEL ANALYSIS

Quantifying the use of multi-level analysis (ML) is another new feature in the 2019 report. It replaces the previous, rather vague code of ‘macro data use’ which could often mean no more than a descriptive use of the GDP or Gini measure in the text, as opposed to the much more precise ‘multi-level’ code which captures the presence the actual **multi-level method**. The new coding was applied retroactively for the entire repository of 2800 ESS downloaded publications.

Apart from making the code more precise and relevant, the rationale for this change was the expansion of the ML method in comparative research. Modern comparative research is multi-level, it explores societal dynamic generated by the interaction between individual (actors) and institutional levels (Andreß et al. 2019). By far the most popular ML method is regression analysis (also among ESS authors) in which **individual-level outcomes are modelled as a function of both individual-level and country-level characteristics**. “Multi-country data sets are attractive because they offer a means of quantifying the extent to which differences in outcomes reflect differences in the effects of country-specific features of demographic structure, labour markets, and other socio-economic institutions” (Bryan, M., & Jenkins 2015).

Despite the superior explanatory power of the ML method, however, a much debated issue is fulfilling its statistical requirements. The question touches a much wider issue of comparative survey **membership size**, considering that membership in most cases statistically translates into second-order units (i.e. countries). According to Bryan, M., & Jenkins influential study, one needs at least 25 countries for linear models and at least 30 countries for logit models to provide reliable estimates of country effects. Judging by our ad-hoc qualitative review while coding the multi-level keyword quite a few ESS based authors refrain from using the multi-level method fearing their (sub)set of countries is too small. Some replace countries with much more numerous regional units, but this is only possible when regional-level macro characteristics are available, which is not too often.

Nevertheless, the use of the ML methods among ESS authors is widespread. Out of 1821 downloaded journal articles **34.8% contain multilevel analysis**. A typical example of how individual level relationships are modified by the macro context would be the association between the unemployment or single motherhood status and happiness. Presumably the association is negative, but its strength may be significantly weakened or even suspended in different welfare regimes or normative environments, which is why the explanatory power of individual-level analysis often limited. The notion of multi-level modelling itself is, obviously, making a strong case for cross-national research which enables individual-level relationships to be tested in a variety of country context.

Considering the logic of the individual-level macro-level relationship it is not surprising that **the use of ML methods is not topic neutral**. Some phenomena can be mostly explored at individual level and a multilevel perspective does not add significant explanatory gains, or such is the position of the analysts. In others, multilevel perspective is applied much more often as macro predictors are widely expected to modify individual-level relationships. Figure 5 shows that the topics of welfare, family-work, immigration and health are most

often analysed using ML methods, while culture, values, subjective well-being are less so, being areas where public policy regulation has much less presence.

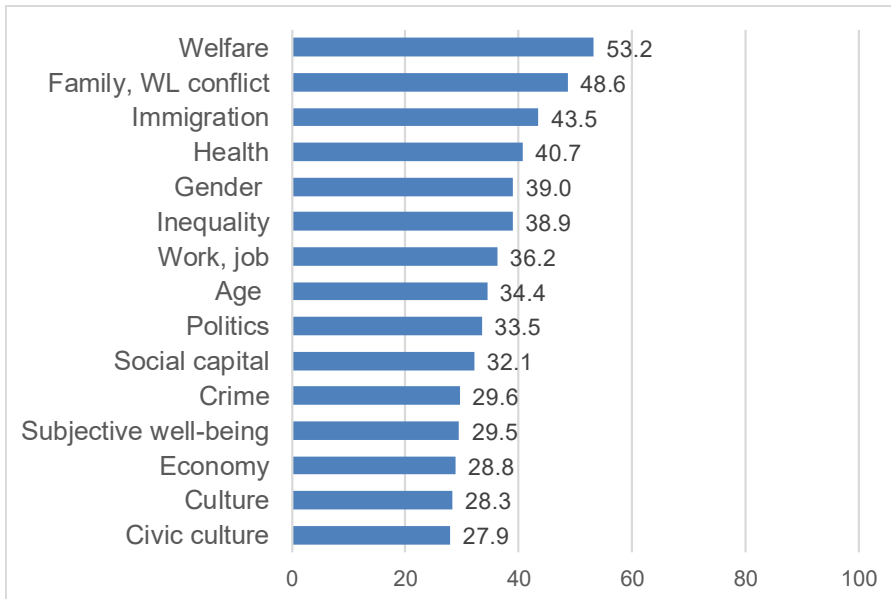


Figure 5: The share of multi-level journal articles across topics (N= 1821)

Another interesting angle that at least partly relates to capacity issues is to what extent ML methods are used by ESS authors across different regions (Figure 6).

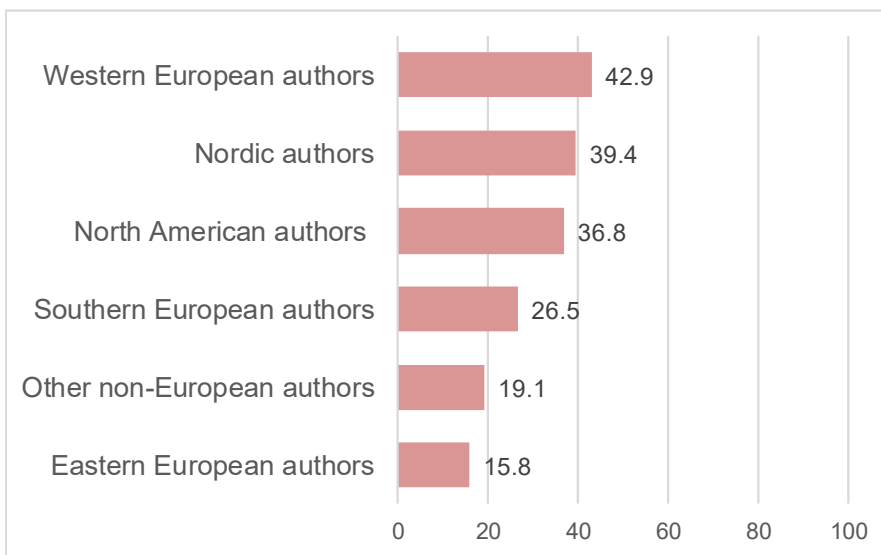


Figure 6: The share of multi-level articles across authors' regional affiliation (N= 1819)

There seem to be considerable differences in the use of multi-level analysis among ESS **authors from different regions**. In articles where 1st author is Western European, ML method is used more than twice as much as in cases when 1st authors are Eastern or Southern European. Part of the explanation may be analytical preferences, with West and North European authors, as well as North American authors, more often analysing topics that call for the use of ML analyses (e.g. welfare, immigration, work-life conflict). Yet, considering that the overall patterns of topics choice are not radically different, most of the gap in the use of ML methods seem to be a capacity and training issue, i.e. the issue of knowledge deficit in statistical skills and techniques in Eastern and Southern Europe. In this

view, the SUSTAIN 2 programme of 10 **national-level methodological seminars** in ESS countries should be more than welcome.

5 ESS-BASED KNOWLEDGE PRODUCTION ACROSS COUNTRIES AND REGIONS

ESFRI Roadmap document from 2018 and the Landscape analysis it contains repeatedly mention the **'Pan-European' relevance of research infrastructures**. It states that "European data collecting infrastructures only have European Added Value, if they are able to provide data from all over Europe". It further argues that some areas of Europe, e.g. eastern and southern parts, are less represented in ESFRI SCI RIs than others, which may have negative implications in terms of the creation of biases in understanding of Europe and the undermining of European comparative research" (ESFRI 2018: 151). ESS ERIC, of course, fulfils the Pan-European requirement by including members from all European regions and by having generally expanded its membership and comparative scope after becoming an ERIC. Nevertheless, it is useful to have these expectations in mind not just in terms of data production, but also findings or knowledge production.

The main goal of examining institutional affiliations of ESS authors is specifically to monitor the findings production patterns across European countries and regions, as well as its global extension. This is again relevant in the light of the Roadmap document which points to **the global dimension** as well and states that Global cooperation of RIs is strategic to Europe for maintaining leadership in standardization of data protocols and the sharing of best practices all over the world (ibid.). ESS already has a share of global users, yet this share has the potential to grow exponentially if stable world-wide co-operations are established (e.g. Australia, South Africa, possibly the Americas and Asia). This way ESS indicators would have the added dimension of global comparisons.

To present a more thorough picture of national authorships and explore cross-national collaboration, the coding of ESS authors was expanded in 2019. Instead of just 1st authors, **up to five authors** were coded in ESS 2018 publications. The extended coding was also applied retroactively for journal articles, but not for other types publications due to a considerable effort needed to identify institutional affiliations (e.g. for book chapters). In sum, 1st authors were coded for all 4417 ESS publications, while up to 5 authors were coded for all journal articles in the 2004 - 2018 period, as well as all 2018 publications. This actually includes the large majority of ESS authors and is currently the maximum authorship picture the bibliographic report can provide.

Another benefit of extended coding is the possibility to observe **patterns of authorship cooperation** (Figure 7). As can be seen from the chart, the most common format for an ESS based journal article is national-level cooperation, i.e. two or more authors coming from the same country. This is followed by single authorships, while 25.2% of articles are written in cross-national cooperation. We have no comparisons with other surveys but can assume that the patterns are quite similar as there is no reason for ESS based authors to deviate from others.

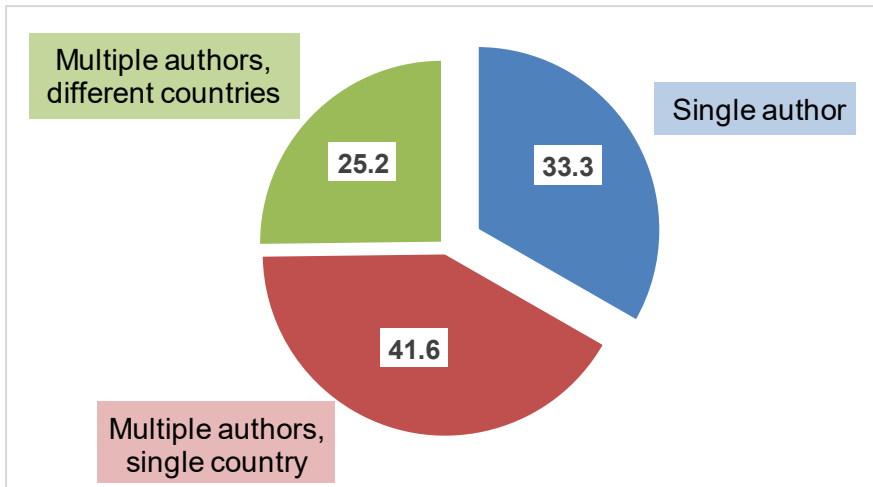


Figure 7: The pattern of national and cross-national authorships (N=2183 journal articles)

Cross-time comparisons are possible though (Figure 8) and reveal a moderate trend of falling single authorship, a stable trend of national co-operations and a moderate growing trend in international co-authorships.

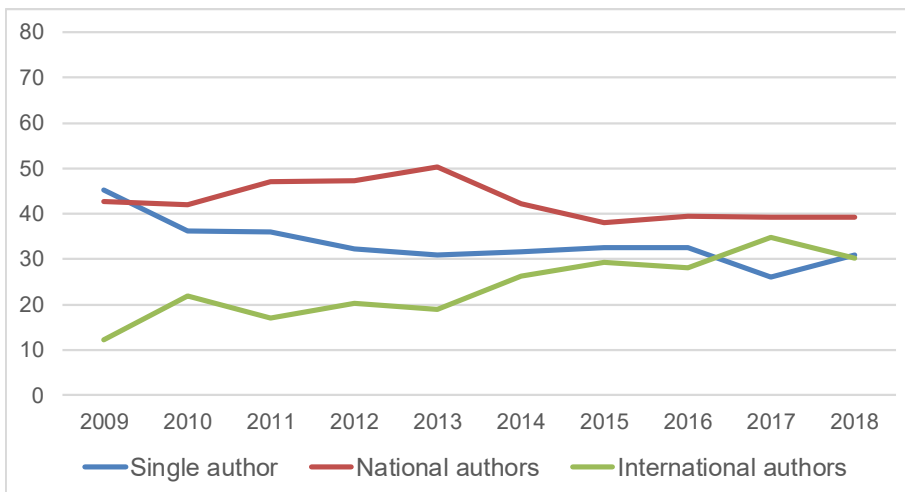


Figure 8: Trends in national and cross-national authorships (N=1804 journal articles)

Table 1 presents the **distribution of authorships across ESS countries** and USA, both the total number of authors and the number of publications where at least 1 author from a country was included. With up to five authors coded, the table presents a more comprehensive picture of authorships from individual countries than in was the case previous years. It should be particularly relevant for NCs and GA representatives interested in the extent of national ESS academic usage. It should also be noted though that despite the extended coding the ‘ranking’ of countries itself does not deviate from previous years when only 1st authors were used. With only 25% of publications having cross-national authorship, 1st authors are in fact a rather accurate representation of a country’s relative publishing strength, at least as far as the number of publications is concerned.

Table 1: Author’s affiliations across countries (2003-2018, N=4417)

Country	All authors*	All Publications**	Country	All authors	All publications
UK	854	644	Hungary	99	66
Germany	704	566	Greece	93	61
Netherlands	652	437	Russia	70	51
USA	558	444	Czech R	64	51
Belgium	458	302	Romania	57	41
Spain	384	274	Slovenia	56	39
Sweden	334	262	Turkey	40	29
Italy	281	215	Slovakia	36	25
Portugal	236	139	Luxembourg	34	34
Norway	230	148	Bulgaria	28	20
Switzerland	221	160	Lithuania	25	16
Finland	182	125	Cyprus	21	16
Denmark	166	124	Ukraine	15	14
Estonia	148	85	Iceland	11	10
Poland	141	114	Croatia	10	6
Ireland	136	99	Latvia	8	7
France	121	97	Kosovo	3	1
Israel	118	87	Albania	2	2
Austria	100	67			

* A maximum sum of authors (1st authors for all types of publications and 1-5 authors for journal articles)

** A maximum number of publications with at least 1 author from a country

To obtain a more **condensed picture of ESS based knowledge production**, Figure 9 presents publication shares across regions, i.e. publications co-written by at least one author from a particular region.

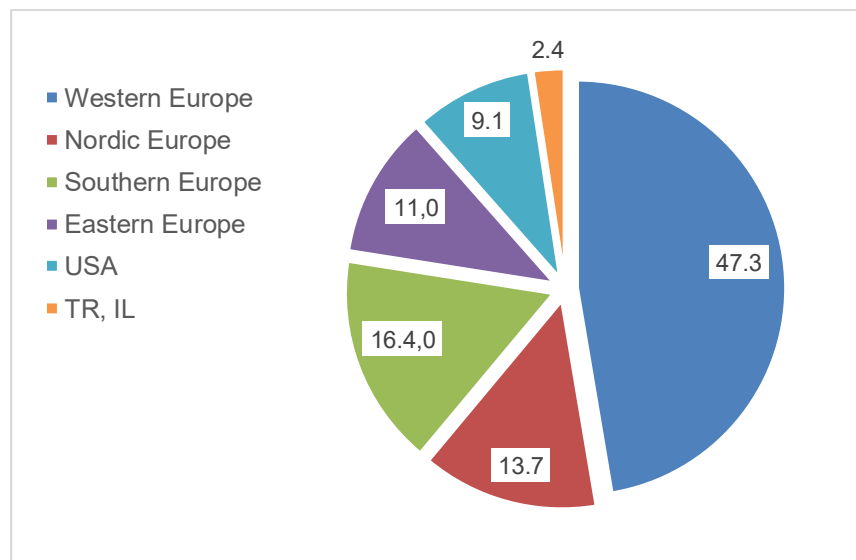


Figure 9: ESS based knowledge production across regions (2003-2018, N=4417)

As can be seen from the chart, there are notable differences between regions in the volume of scientific production, measured by the number of ESS publications. Western European and Nordic countries generate 60% of ESS based findings and the USA an additional 9%. Therefore a **potential Western bias cannot be excluded**, both in terms of ESS questionnaire content and findings (authorship structure). When it comes to immigration,

for example, the addition of an **emigration** aspect or even a creation of a separate emigration module could prove quite relevant in Eastern and Southern European countries which have been facing the brain drain problem for two decades, along with its social, political and economic consequences. However, it is only natural that Western European authors or QDTs will approach societal issues from an angle that is perceived as most relevant by their scientific communities and funders.

On the other hand, scientific systems from other regions seem to be, to a various extent, failing to accomplish this task. To highlight this point, Figure 10 contrasts regional shares of ESS publications with the share of population from that region. According to UN statistics, ESS R1 – R9 countries contain 720 million people (without Turkey and Israel, which could not be classified into the four regions). While Western European and Nordic social science systems are producing a large relative per-capita ‘surplus’ in terms of scientific publications, the Southern European and EU Eastern Europe region are in considerable ‘deficit’. In case of Eastern Europe, the ‘deficit’ becomes enormous when Russia and Ukraine are added, two large countries with very weak per-capita ESS scientific outputs.

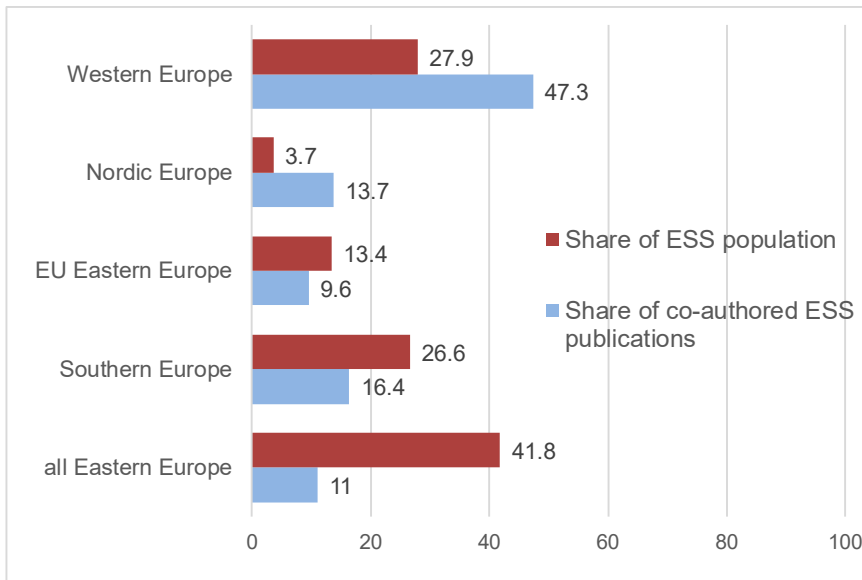


Figure 10: A comparison of publication and population shares (2003-2018, N=4417)

ESS is relatively limited in what it can do to address this ‘**knowledge production gap**’. Likely reasons go far beyond any survey’s scope of influence, probably encompassing factors such as national GDP levels, social and political circumstances, scientific investments, epistemological traditions (qualitative vs. quantitative), level of internationalization and others. Nonetheless, any training, dissemination or cooperation initiative could help improve the picture at least to some extent. Consultations with respective NCs or other scholars from these regions could also be useful, providing insight into reasons behind the ‘publication deficit’ and help identify strategies for improvements. For the time being it is certainly wise to be aware of this gap when considering the generalizability of ESS based findings and policy solutions.

6 THE USE OF NATIONAL DATA

In the current report, monitoring the use of data from ESS member countries is based on 2661 downloaded publications. In **85.2% of publications ESS data was used comparatively**, with more than one country studied, while in the remaining 14.3% data from only one ESS country was used. Figure 11 presents the shares of country data inclusion across all countries that participated in at least one ESS round.

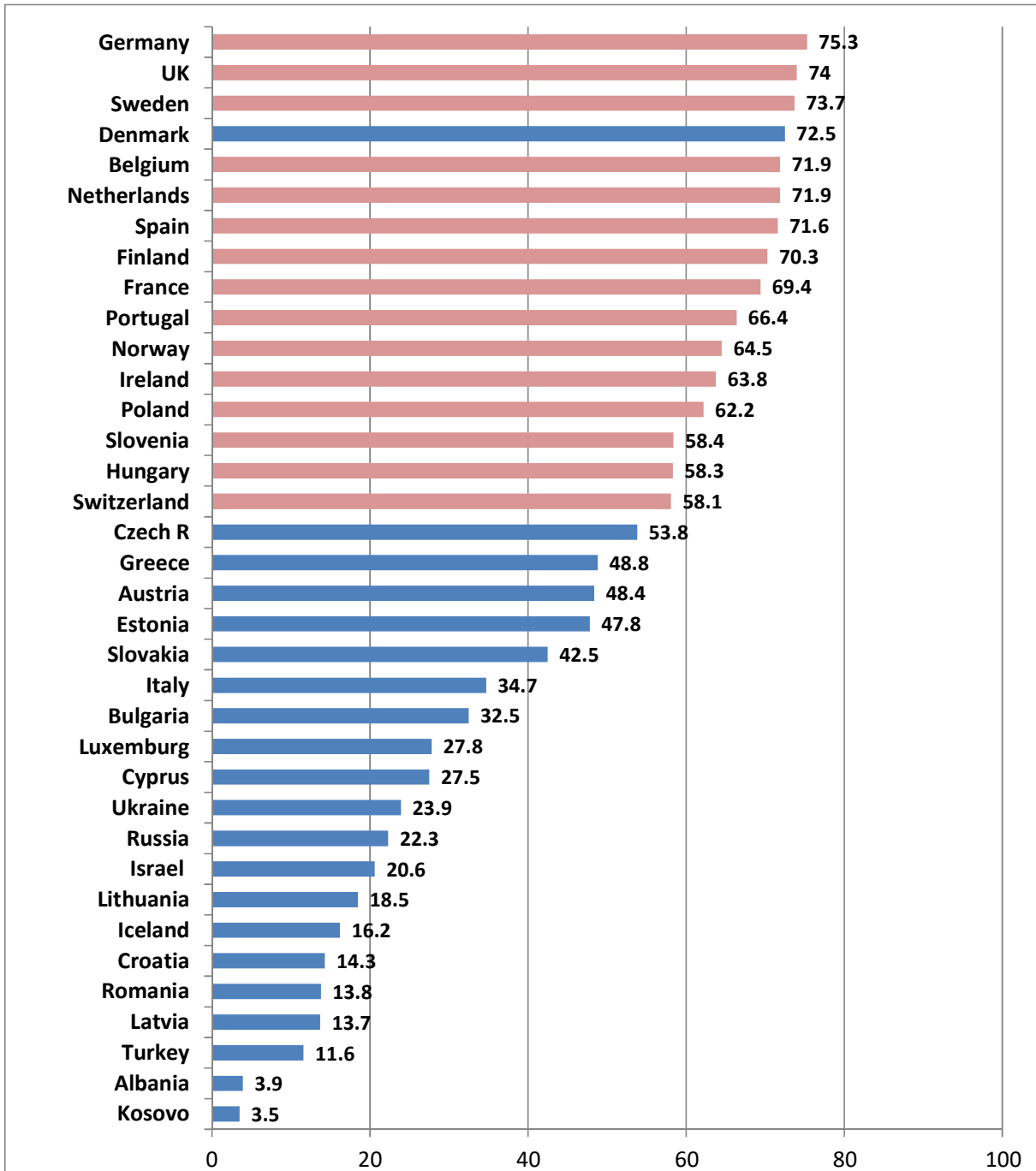


Figure 11: Country data inclusion rates. Countries with red bars have fielded all 8 rounds (2003-2018, N=2658)

The chart clearly suggests that the main explanatory factor for high data inclusion is consistent participation which results in a larger **number of country-wave datasets**. On top of the chart are countries that fielded the first 8 rounds relevant for publishing, with the exception of Denmark which skipped round 8, but due to publication lag this is not yet reflected in its inclusion rates. Even though inconsistent participation harms primarily national science communities, it is not only a problem of individual countries, but The ESS survey as a whole. It reduces its comparative scope and analytical possibilities (pooling of rounds, cross time comparisons) and thus diminishes its user value.

Data exclusion

Coding reasons for exclusion is another new aspect introduced to the 2019 bibliographic report. While inclusion rates provide essential information on country data use in academic publications and highlight the importance of consistent participation, they cannot explain the differences in inclusion between countries that fielded the same rounds or the same number of rounds. For example, the inclusion gap between 8-round countries is between 15% and 20% and is obviously not related to participation issues. In order to find out **why analysts exclude individual countries** despite their data being available the ESS cumulative file, 2800 downloaded publications were keyword-searched for exclusion explanations. The search was successful in 678 cases, for which for exclusion reasons were then coded into five main categories presented in Figure 12. Up to two exclusion reasons were coded per publication.

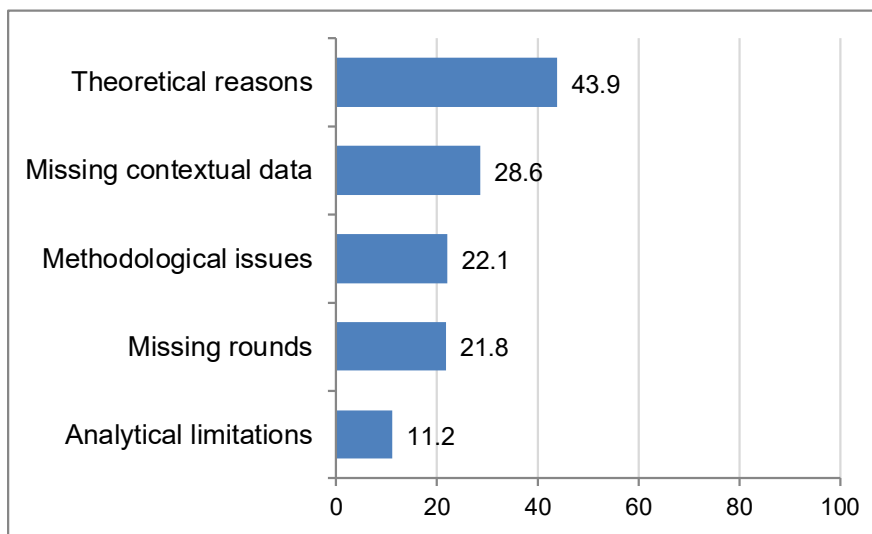


Figure 12: Explanations for country exclusion (2003-2018, N=678)

Among the 678 publications that explain inclusion-exclusion strategy 43.9% cite **theoretical reasons** for dropping of one or more countries. It is likely that the presence of theoretical exclusion is in fact much larger, though not explicitly mentioned, and explains the majority of country-selection decisions. This is to be expected given that in comparative research the selection of countries should be based on their theoretical relevance and “should ideally be confined to the smallest number of countries consistent with their aims, rather than celebrating as many nations as possible in their purview” (Jowell 1998; Goerres et al. 2019). In the light of the authorship structure discussed in the previous section it is also not surprising that Eastern European countries are excluded ‘disproportionally’ often. Generally,

at least one EU15 country is included in 98.1% of multi-country publications (i.e. those where at least 2 countries are compared), as opposed to the 81.0% share of Eastern European countries. The gap is largely the result of mainstream subject choices by predominantly Western authors who, in order to obtain an analytically relevant (e.g. contextually similar) set of countries, exclude outliers or atypical cases such as Eastern European countries. This is evident from the fact that theoretical exclusion is not randomly distributed across topics, as demonstrated by Figure 13.

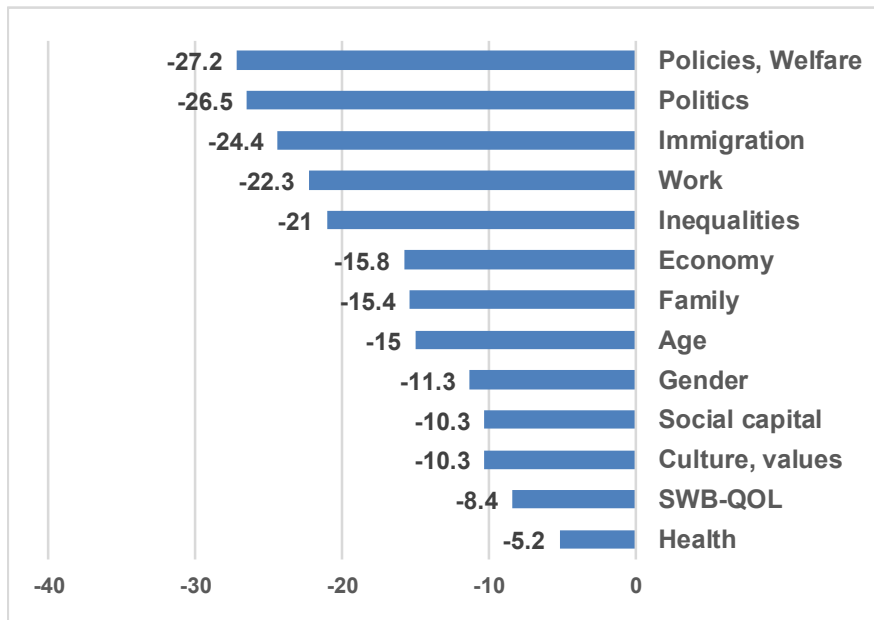


Figure 13: 'Inclusion deficit' of Eastern European countries across most analysed topics (N=2207, publications that compare at least 2 countries)

Among the most **'selective'** topics are welfare, politics and immigration which are also the three most frequent topics ESS authors address. For example, the widely used Esping-Andersen welfare typology, at least in its original form, does not include Eastern European post-socialist welfare regime. The phenomenon of immigration-related radical right populism also is specific to the EU15 Western Europe, as is the nature of immigration issues and the structure of immigrant populations in these countries². Here analysts seek to harmonize country characteristics in order to better isolate the observed relationships. On the other hand, the most **'inclusive'** topics are those that are typically observed at individual level (health, subjective well-being) or are framed by universalist theories (culture, civic culture, values). Here differences in country characteristics are welcome in terms of observing contextual effects in explanatory models. All in all, the issue of 'theoretical selection deficit' is not nearly as challenging as the issue of knowledge production imbalance addressed previously, but is related to it. It could again be addressed solely through a general capacity-building strategy that would change the authorship structure, i.e. increase the production of findings in now marginalized ESS regions and expand the scope of issues under investigation.

The second most frequent reason for country exclusion is **missing contextual data** (28.6%). The share is rather considerable and mostly affects countries that are not EU or OECD members. Contextual data provided by statistical offices and other

² For example, the 'foreign born' population in Eastern Europe has a completely different ethnic and historical background and is mostly the product of the disintegration of former multi-ethnic counties (USSR, Yugoslavia) and the ensuing changes in citizenship structure

administrative sources are the key ingredient in multilevel models discussed previously. In the era when multi-level analysis is becoming prevalent, the lack or absence of macro data can really be an obstacle in country survey data use. ESS has of course addressed the problem of contextual indicators with its **multilevel data resource**, an excellent tool which most likely reduces the number of exclusions. It is, however, dependent on outside macro-data providers and analysts are still faced with numerous gaps.

While theoretical selection and missing contextual data are largely outside ESS control, a considerable share of publications cited more internal or semi-internal issues for the exclusion. One was **skipping rounds** which often results in exclusion of individual countries from multi-round publications. Analysts would combine two or more rounds and preserve countries that fielded at least two, three or four rounds to make cross-time or before-after comparisons, to preserve roughly equal sample sizes or to obtain stable country patterns by averaging (pooling) them across rounds. Skipping rounds is primarily a funding issue and can be expected to gradually decrease with the stabilization of national funding schemes under the ESS ERIC framework. Another frequently cited reason for exclusion are **methodological issues**, such as high item non-response, omitted items, problems with translation, problems with weights or sign-offs and similar. Some of these issues could be addressed primarily by the ESS national teams. Finally, authors cite **analytical reasons** or limitations to exclude countries such as small sample sizes, small analytical sub-groups, problems with factor loadings, low number of NUTS regions, low variation and similar.

7 THE USE OF A, B, C CORE AND ROTATING MODULES

Designing questionnaire content is of course an essential element of survey governance as it **sets the parameters for analytical possibilities**, i.e. the scope of topics and theoretical approaches, the types of academic communities engaged and similar. A hybrid of core-based and modules-based design, ESS offers strong possibilities both for cross-time analysis and cross-round data pooling, as well possibilities for content innovation and external scientific input through its rotating modules. Annual bibliographic reports provide statistics on the use of questionnaire sections and individual items (see Appendix 2) with the key aim to inform ESS bodies on their fitness for purpose, at least as far as the usage aspect is concerned. This was the case with the current Core review, another example are QDTs designing ESS repeat modules, or SAB selecting them.

Monitoring the use of questionnaire sections is based on the documented item use in 2733 downloaded papers, the minimum criterion being at least 1 item found from a respective section. In most cases items are listed in the *Data and methods* part of publications, otherwise they are identified from tables, appendices and the text itself. Figure 14 shows the distribution of usage between the substantive **ABC Core and rotating modules**. About 45% of ESS publications include only ABC Core substantive items, while about a third includes a mix of core and module items. The smallest share represent publications that are based exclusively on module items (and F demographic items, in most cases).

The main factor in explaining high usage of the ABC Core is the combination of powerful concepts such as social capital, political participation, subjective wellbeing etc., and

biannual fielding frequency which results in a dense time-series and makes the core section epistemologically attractive in terms of trend analysis, cross-round merging, increasing sample sizes etc.

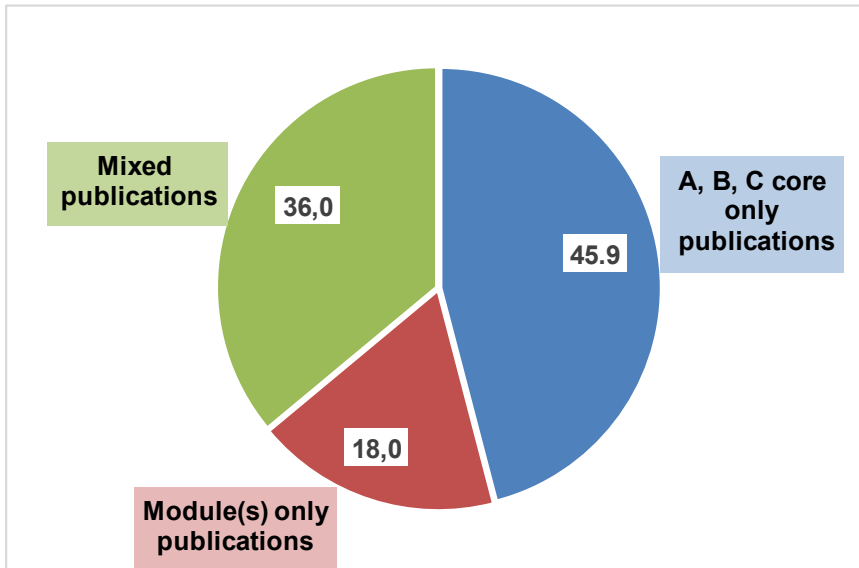


Figure 14: The use of A, B, C core and modules (N = 2733)

Figures 15 and 16 focus on **the use of rotating modules** and Portrait values questionnaire. The latter is part of the ESS core, but is treated as a separate section for being a thematically separate compact unit. Its fielding frequency is of course much denser than in the case of rotating modules. Among the rotating modules, the most popular overall are **Immigration and Work & Family**, followed by a group of three: **Well-being, Welfare and Citizenship**. Among these, Citizenship is the only case where no repeat module was designed, which is somewhat unfortunate considering the salience of the citizenship-related concepts in ESS publications, outlined in the theoretical mapping section. ESS would very much benefit by a repeat Citizenship module.

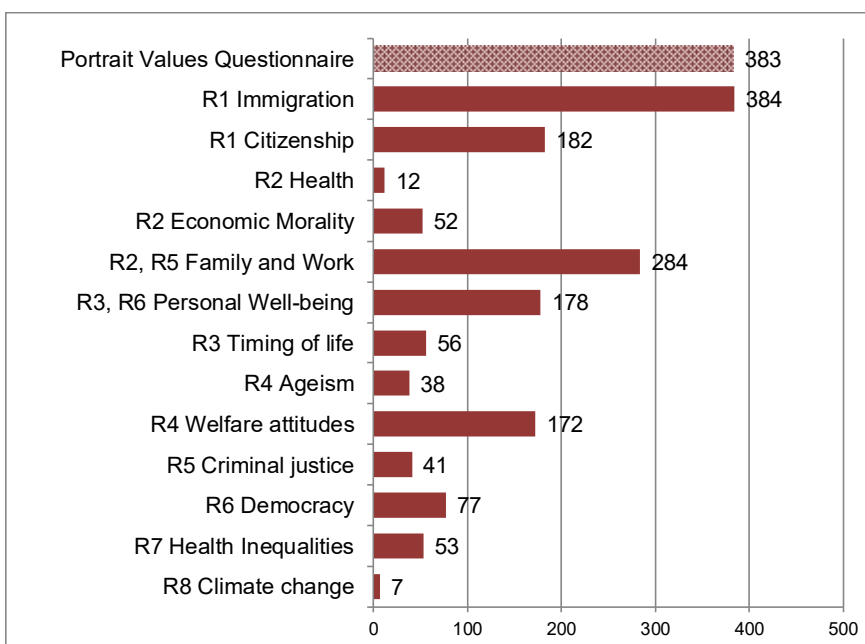


Figure 15: The use of ABC Core and rotating modules (2003-2018, N=2822)

Other modules are used less frequently and seem to thematically engage a narrower academic audience (Economic morality, Timing of life, Ageism and Criminal justice). As to the R6-R8 modules, they are still fairly recent. The next 3-5 years will show the full potential of their usage, though it is already quite significant for the Democracy and Health Inequalities modules.

Figure 16 presents the most recent picture of modules used. The most used module in **publishing year 2018** was Immigration, while other traditionally well used modules also remain on top, suggesting that immigration, welfare, well-being and work-life conflict issues remain the analytical focus of many researchers. The Democracy and Health Inequalities modules also continue to show good use.

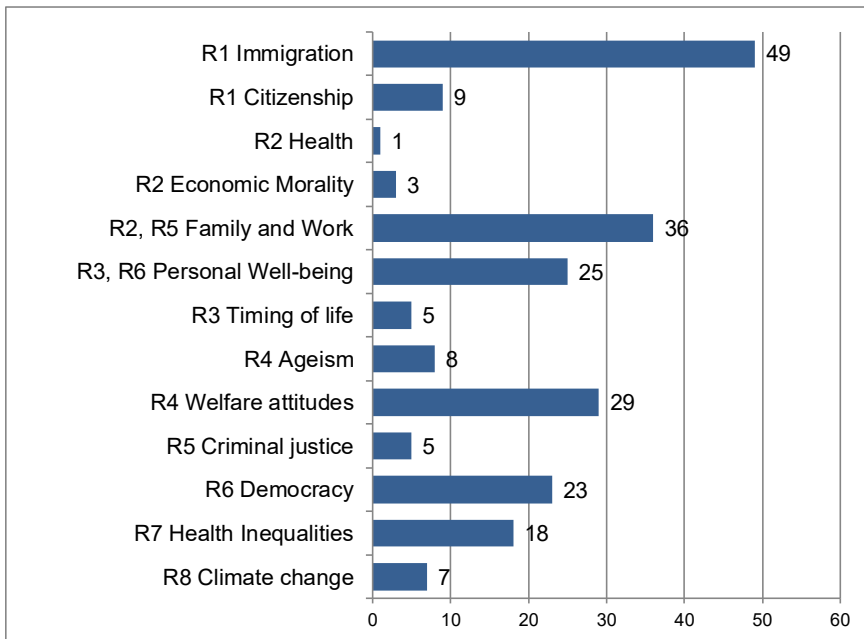


Figure 16: The use of rotating modules in 2018 (N=451)

As already mentioned, the use of individual items is provided in Appendix 2.

8 THE USE OF ESS ROUNDS AND ANALYTIC FEEDBACK

8.1 Round use

Information on the use of ESS rounds was obtained from 2781 downloaded publications. As shown by Figure 17, there is a **well-established cycle of rounds use**. A freshly published dataset is picked up immediately after being issued on the ESS webpage and reaches its publication peak about 5 years later. In accordance with this cycle the most used round in the publishing year 2018 was Round 5 which was fielded in 2010 and had the first cumulative data file published at the end of 2011. After 5 or 6 years a round's usage begins to stabilize at about 30-50% inclusion rate in annual ESS publications. The main reason for this continuous usage are **multiple round publications**, a common analytical strategy by ESS authors. In year 2018 about 50% publications included more than one round (Figure 18) and as many as 39% used three or more rounds for cross-time or cross-sectional analysis. The use of an earlier round is also revitalized by a **repeat module** as authors compare the two

time points or pool data. In terms of cross-time analysis the value of earlier rounds will continue to increase with time.

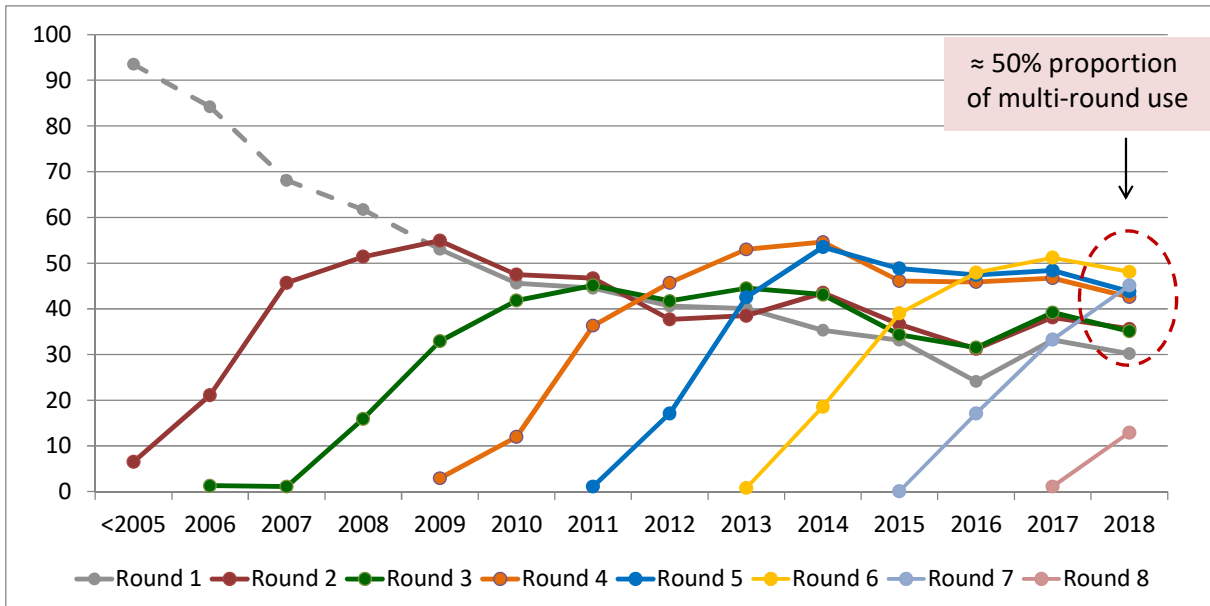


Figure 17: The cycle of rounds use in ESS publications (2003-2018, N=2781)

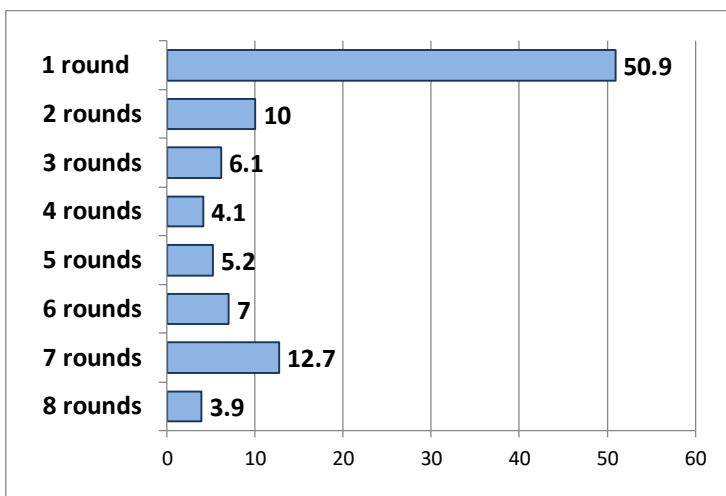


Figure 18: Number of rounds used in 2018 publications (N=440)

The picture is similar among the 385 publications that use single-country data. In 38.4% cases these publication use more than one national round, either to examine trends or pool data. This pattern of usage highlights the national-level value of the ESS time series.

As mentioned in previous reports, the aspect of cumulating rounds should be taken into account when dropping items that seem to be of little analytical use at the national level (e.g. political party membership). Their usefulness can increase considerably in the context of the cumulative ESS sample, where a nationally marginal group can increase manifold in size and become analytically feasible.

8.2 Analytic feedback

For several years now, the bibliographic reports have provided information on the extent of combining ESS micro data with **micro data from other surveys**, either national, but more often comparative. This is the case with about one third of ESS publications (Figure 19). In addition to the general picture, the presence of micro data from several other comparative

surveys is documented specifically. Among the 1791 journal articles the most common combinations with ESS micro data include WVS (100), EVS (83), Eurobarometer (77) and ISSP (54). There are only 6 journal articles where ESS is combined with SHARE data though.

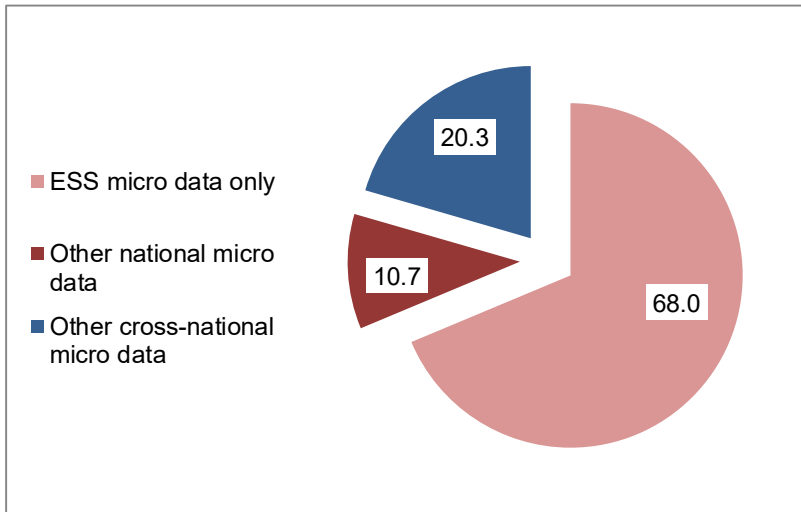


Figure 19: The presence of non-ESS micro data (2003-2018, N=2789)

To obtain insight into the scope of **regional level analysis**, articles were coded for the use of the NUTS variable. Overall, 6.1% of ESS articles use the variable to explain the social phenomena under investigation. The wider use of regional analysis is often hampered by the absence of macro data at this level. **Data file edition** is cited in 24.8% of journal articles and often indicates that ESS recommended citation was used. References to the use or population **weights** were made in 34.6% of articles and ESS response rate was mentioned in 18.3%. **ESS web pages** were cited in 43.3% of articles.

In order to obtain a more general picture of the **authors' methodological awareness** an index was constructed from the three indicators (i.e. citing response rate, weights use and file edition). While methodological excellence is the key feature of the ESS ERIC and also a key ESFRI requirement for the status of a research infrastructure, the question remains to what extent users recognize and appreciate ESS high level of excellence as opposed to similar comparative surveys that are much less methodologically rigorous.

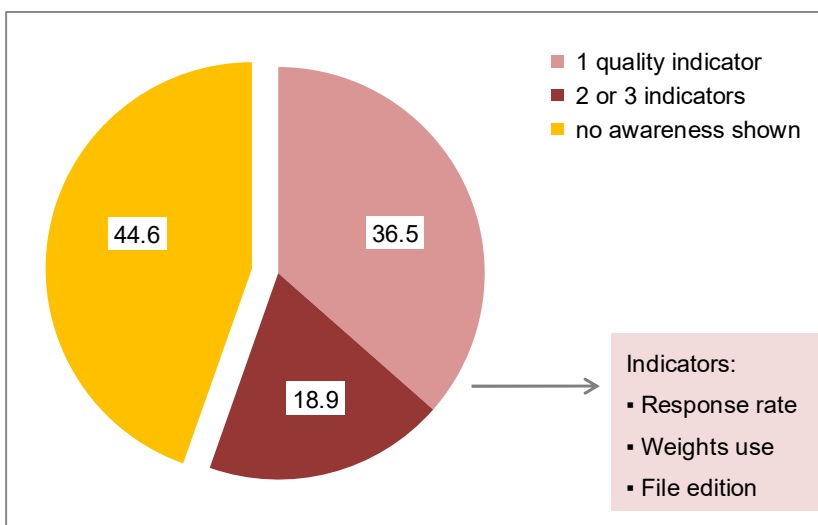


Figure 20: Methodological awareness among ESS authors (N=1821 journal articles)

Figure 20 shows that in the majority of ESS publications (55.4%) at least 1 ‘quality awareness indicator’ was detected and in about 20% of them two or three indicators. This leaves about 45% of publications where neither references to response rate, or weight use or, file edition were provided. Health & Medical journals display markedly higher culture of methodological awareness than other disciplines, with 77.9% of their ESS publications containing at least one ‘quality awareness indicator’. A more qualitatively oriented approach would be needed to obtain a better insight into the status of methodological rigour in selecting ESS data for analysis.

9 ACCESSING ESS PUBLICATIONS

ESFRI Landscape analysis postulates Open Access as one component of **Open Science** – the movement to give access to data, research and publications and open up the whole research cycle for participation and collaboration (109). In the document the working group for social sciences (SCI SWG) established that the development of Open Access for publications in SSH seems to lag behind other scientific disciplines, one of the reasons being that a large part of the scientific production in SSH disciplines is published in books and not journals (109). This is less the case for quantitative social sciences where most of ESS users come from (as opposed to ethnography, for instance) but can still be an issue.

Considering the scientific and political importance of open science ESS bibliographic reports have been following access to ESS publications for a number of years. The three relevant types of publications are journal articles, books and book chapters. Working papers and reports are usually open access publications, while theses suffer a selection bias as they only included in the annual count if access is open in the first place. Figure 21 presents **access to ESS journal articles and book chapters from a home computer**, a realistic test of access as opposed to university IPs with subscription schemes.

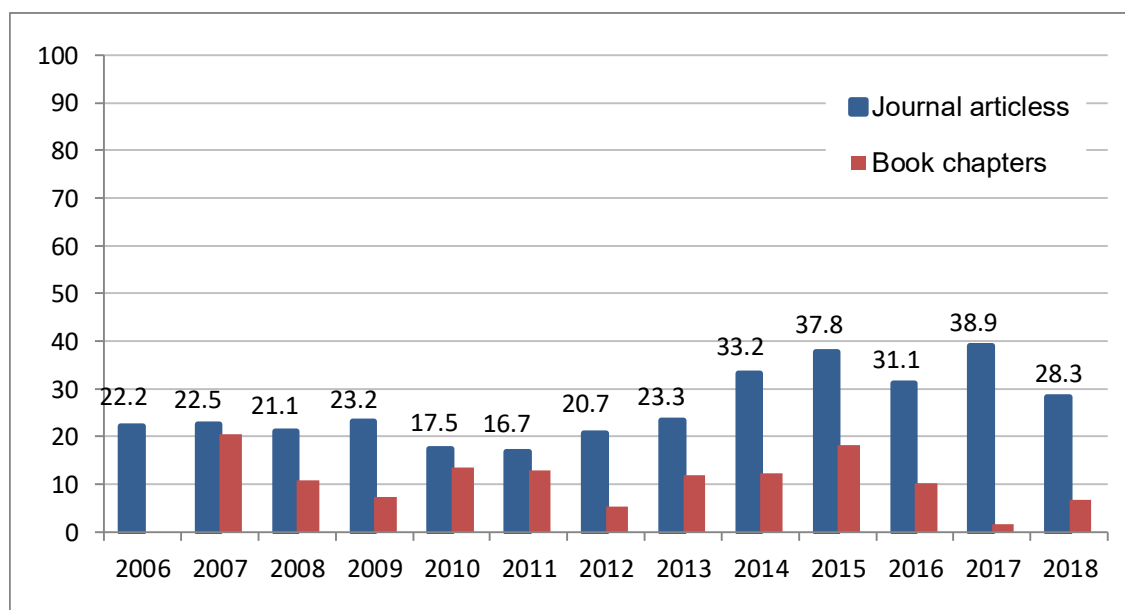


Figure 21: Open access to ESS journal articles and book chapters from a home computer (2004-2018, N=2183)

Among the 2840 ESS journal articles, books and chapters, 23.7% could be accessed from a home computer. However, the average openness rate is in fact 10-15 higher after the year 2014, indicating a **gradual openness trend**, despite oscillations. This could either mean that more journals promote open access policy, or that authors and their institutions are progressively paying the journals for open access, which is often required by national and EU public funders (see Suber, 2012; Kimbrough & Gasaway, 2016).

There are some marked **differences between disciplines**, with 17.1% open access ESS articles recorded in political science journals, 23.6% in sociological journals, 47.6% in medical and 50% in demographic journals. This seems to corroborate SCI-SWG argument about social sciences lagging behind in open access. It is again unclear whether these discrepancies are the result of journal policies or institutional investments in the medical science fields. With respect to books and chapters no similar openness trend can be observed and they remain the most inaccessible academic publication category. This is, again, a particularly strong issue in the area of social sciences.

In sum, the majority of high quality peer-reviewed scientific publications are not freely accessible, including the majority of ESS publications. The issue is particularly relevant for users who are not affiliated in academic institutions (e.g. private companies, NGOs, general public etc.).

10 INFORMING POLICY

Informing policy making is generally regarded as the expected type of social impact in social sciences. In the ESFRI Roadmap, an important indicator of socio-economic impact in case of social science infrastructures is research on evidence-based public policy (ESFRI 2018: 146). By offering a possibility to compare outcomes of different policy solutions as macro structural elements, cross-national surveys provide an ideal research format to examine policy effects. Hence it is sometimes postulated that country-level comparisons, usually impossible to run at the societal level, are the closest substitute for experimental research in area of social sciences because social phenomena are otherwise hard or impossible to manipulate (Smelser 1976).

To estimate the presence of **policy-oriented content** in ESS journal articles a simple and robust quantitative indicator has been used in a number of previous bibliographic reports, i.e. the frequency of keywords “policy” and “policies”.

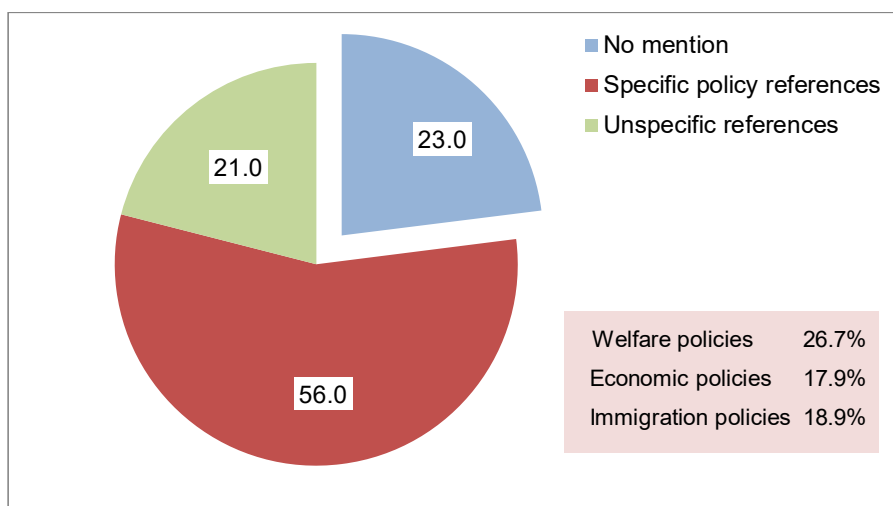


Figure 22: Policy references in ESS journal articles (N=1806)

The keywords were present in 77% of the 1806 examined articles, 9.7 times on average. Up to two-thirds of policy references are domain specific, with the most frequent being welfare, immigration and economic policies.

According to impact analysts, societal impact, including policy impact, is much harder to measure than scientific impact, and there are probably no indicators that can be used across all disciplines (Bornmann, 2012). There is also the issue of time lag. The concept of 'knowledge creep' postulates that new data or information becomes accepted and gets absorbed over time. "This is particularly recognized in the development of new government policy where findings can influence policy debate and policy change, without recognition of the contributing research". This is recognized as being particularly problematic within the social sciences where informing policy is a likely impact of research (Penfield et al. 2014).

The crude keywords-based bibliographic measurement of the presence of 'policy content' in ESS publications has become somewhat less relevant after the ESS had commissioned the Technopolis impact study which used case study methodology to identify specific examples of ESS policy use across member countries. What the bibliographic methodology can contribute are general patterns of 'policy content concentration', such as those revealed by Figure 22.

11 CONCLUDING REMARKS

ESS is the leading European comparative data source on a number of social issues such as immigration, political participation, work-life conflict, subjective wellbeing and others. It is also the leading source of methodological innovation in comparative survey research. ESS methodological rigour and fast growing cumulative samples offer so far unparalleled analytical opportunities for developing theories and informing policies.

The 2019 annual bibliographic report made specific effort to repeatedly refer to the forthcoming ESFRI evaluation exercises and link parts of the content to key performance indicators. General expectations from RIs include both scientific excellence and wider social value. In terms of the former, ESS is in an excellent position to demonstrate its scientific relevance, both by the number of scientific publications and their theoretical content, as well as the spread of its academic usage across disciplines. Though not likely, the report points to where ESS pan-European dimension could be challenged, highlighting the case of uneven regional distribution of knowledge production and to a minor extent, country data inclusion. These are the areas where ESS could consider devising new or continuing existing strategies of capacity building in its member countries, using face-to-face and online training platforms (such as training seminars and EduNet).

RIs are also expected to establish global links and in terms of academic usage and methodological networking ESS is already a global infrastructure. Nevertheless, this is an area with huge potential for the future growth of academic usage, provided that stable cooperation is established with global partners. The epistemological value of ESS data would benefit considerably if global comparisons would become possible.

In terms of societal impact, topics mapping, policy keywords counts and multi-level methods patterns triangulate the general areas where ESS-based socioeconomic impact is potentially strongest with respect to informing policies (i.e. social welfare, immigration, family, labour market, gender policies and other). Nevertheless, specific policy impact across ESS countries can be better demonstrated using case study methodology.

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