

**Support for Technocratic Decision-Making in the
OECD Countries: Attitudes toward Apolitical
Politics**

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To my father, a scientist dedicated to the diffusion of knowledge. He would have been very proud.

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Chapter 1

Introduction

Why talk about *technocracy* in a time when democracies are consolidating all over the world? The term rings of something out-dated and archaic, more suited to the Cold War era, or a George Orwell novel. Out of all possible subjects, why dedicate hours of research to this phenomenon which in no way constitutes a threat to the hegemony of liberal democracies today? This paper will argue that technocracy is indeed a relevant concept in modern societies. Not only has the current financial crisis provoked the formation of temporary technocratic governments in certain European countries, but the technocratic framing of policy-questions and the use of expert knowledge to define political goals are characteristics of present-day policy making which have perhaps not received the full scholarly attention they deserve. This paper will insist that technocracy is not only a system of governance where experts rule by virtue of their knowledge; it is a decision-making paradigm functioning within contemporary democracies.

The motivations for carrying out this study are both personal and academic. At a personal level, the chance to observe the Spanish government's policy responses to combat the financial crisis during these past five years has served as a source of motivation for examining technocratic decision-making. Top-down policies have been implemented and justified in terms of efficiency and effectiveness and what has been deemed good for the financial sector and the economic system has been presented as representing the 'public interest' without further debate. However, most policies have made "the burden of the mistakes of the rich fall on the poor" (Palat, 2012:1) by cutting public spending where it hurts the most and invariably favouring capital over labour. Unable to counter-argue what prestigious financial institutions claim to be true, citizens have become truly disenfranchised when it comes to influencing the choice of policies to combat the current financial situation. In spite of this, the support for technocratic decision-making is considerably high in Spain and in the countries of the OECD. Questions such as *who* supports technocratic decision-making and what might explain this support inspire further inquiry.

On an academic level, this study aims to contribute to a theory of post-industrial technocracy to which, according to Fischer (1990:17), contemporary social and political theory has yet to "devote the kind of serious attention it requires". As we will argue in this paper, research should not only focus on *who* takes decisions in a system of governance, but *how*

these decisions are made. The *mode* of policy-making has changed during the last decades and has become increasingly technical. The implications of this changed nature of politics should not be trivialized, rather research on decision-making paradigms and their implications on democratic quality are of utmost relevance. The essence of our contribution resides in the choice to study technocracy at an attitudinal level. Authors such as Centeno (1993), Laird (1990) and Fischer (1990) have all contributed to a theoretical and conceptual study of contemporary technocracy but little has been said about *people's attitudes toward technocratic decision-making*. The belief that we can learn more about contemporary technocracy by studying the attitudes and behaviour of people in modern post-industrial societies thus motivates this individual-data level study.

The *purpose* of this paper is, as insinuated, to study technocratic attitudes. We will define what we mean by technocratic attitudes and we will analyse what explains this frame of mind among individuals. Specifically we wish to study the relationship between education and technocratic attitudes. According to conventional wisdom *experts* are more likely to support technocracy since this gives them more political power and opportunities to influence policy. In this paper, however, we will argue that higher education does not necessarily lead to higher levels of technocratic mentality and we open a discussion as to why. Furthermore, we will examine how people with technocratic attitudes behave politically. Do they have specific party preferences? Do they participate in elections? The purpose of this is to derive what political implications technocratic mentality may have at an individual level and for society as a whole.

The first part of this paper revises the literature on technocracy. We discuss how technocracy has been defined in the past and how contemporary authors interpret the concept today. We continue by analysing the epistemological foundations of technocratic thought in an intent to understand the roots of contemporary technocratic thinking. In the next section we examine the relationship between technocracy and democracy, commenting on both obvious 'frictions' between the two concepts, but also on possible 'democratic externalities' of technocratic decision-making. Finally we conclude our literature revision by analysing how expert knowledge has been put to use for political purposes and how science can serve to legitimize certain ideological interests. Our next chapter presents our hypotheses. We define what we mean by technocratic attitudes and then move on to look at how education might affect these attitudes and how this mind-set in turn may explain political behaviour, presenting various hypotheses to be contrasted empirically. The next chapter describes our research design. We use data from the World Values Survey in order to run multivariate regressions and study the different relationships in quantitative terms. We continue by presenting our regression results and finally, in the last part of this paper, we discuss our results making more detailed interpretations and, when needed, presenting alternative hypotheses.

Chapter 2

Literature Revision

2.1 Defining technocracy

Few terms are used in such a vague manner as *technocracy*. While we often encounter the word in newspaper articles, blogs and books, little intent is generally made to define the concept in a rigorous way. Perhaps the ‘problem’ when it comes to defining technocracy is that its significance is evolving; it does not mean the same thing today as it did 30-40 years ago. Much like democracy, a concept that has gone through different *transformations* over time, technocracy is an ever changing notion that evolves alongside industrial society. A *classical* definition of technocracy would be something along the lines of: “a system of governance in which technically trained experts rule by virtue of their specialized knowledge and position in dominant political and economic institutions” (Meynaud, 1969:31). The main idea is that while democracy refers to the rule by the people (*demos*), technocracy refers to the *rule by experts*. The term was first coined in 1919 by William Henry Smyth, an American engineer, and was broadly used in the 70’s when technocracy appeared to be a feasible future form of government. Many believed scientists would replace traditional politicians as skilled individuals increasingly filled leading government positions both in democratic and undemocratic regimes. Reagan for example was an economist and Gorbachev an engineer (Ribbhagen, 2010; Fischer, 1990).

During this time period the concept of technocracy attracted considerable scholarly attention. Meynaud (1963:31) defined technocracy as “the rise to power of those who possess technical knowledge or ability, to the detriment of the traditional politicians” and Burnham (1941) argued that ‘managers’ would become the new ruling class, gaining power on the basis of their technical superiority. Galbraith (1967) later developed the term *technostructure* in order to describe the large network of technical experts which would constitute the ‘guiding intelligence’ in group decision-making in modern societies. Implications of the technocracy were intensely debated. While some viewed technocracy as an inevitable step for complex post-industrialized societies, others debated the perceived tensions between technocracy and democracy. Many pointed at the apparent difficulties of ensuring public participation in increasingly complex societies (Dewey, 1927) as well as at the apparent contradictions in the simultaneous transitions toward democracy and the market (Centeno, 1993).

Other authors have focused on defining what characterizes a *technocrat*. According to Bell (1973:348) “the technocrat is one who exercises authority by virtue of his technical competence. [...] In the post-industrial society, technical skills become the base of and education the mode of access to power”. Skills and expertise have often been considered the main characteristics shared by individuals with a technocratic mind-set. Putnam (1977) went a step further by attempting to turn the question of who should be considered a technocrat into an empirical case by exploring *technocratic mentality* among elite bureaucrats in Britain, Germany and Italy. Putnam argued that a technocratic mentality is primarily composed by six elements. First, a technocrat believes that “technics must replace politics and defines his own role in apolitical terms” (Putnam, 1977:387). A technocrat frowns upon political negotiation and debate considering that problem solving requires a strict rational approach. Second, “the technocrat is sceptical and even hostile toward politicians and political institutions” (Putnam, 1977: 386). Technocrats consider politicians to be guided by specific, partial interests, pursuing sub-optimal solutions. Third, “the technocrat is fundamentally unsympathetic to the openness and equality of political democracy” (Putnam, 1977: 386). Since citizens aren’t experts, their contribution can do little for the quality of decision-making. Fourth, “the technocrat believes that social and political conflict is, at best, misguided, and, at worst, contrived” (Putnam, 1977: 386). Negotiations and bargaining is fruitless and inefficient as there is an optimal solution to each given problem. Fifth, “the technocrat rejects ideological or moralistic criteria, preferring to debate policy in practical, ‘pragmatic’ terms when analysing public issues” (Putnam, 1977: 387). What is good or what is right is not a criterion for a technocrat, rather the right question to ask is whether the policy will work effectively and efficiently. Sixth, “the technocrat is strongly committed to technological progress and material productivity; he is less concerned about distributive questions of social justice” (Putnam, 1977: 387). Effectiveness and efficiency become goals in themselves overriding normative objectives.

In the following decades, the public and academic debate concerning technocracy lost general interest. As democracies were consolidated all over the world people argued that technocratic governance could never become a reality. In spite of this, more recently, various authors have argued that technocracy is indeed a highly relevant concept today (Fischer, 1990; Centeno, 1993; Greenwald, 1979; Ribbhagen, 2013). Ribbhagen (2010) points out that the current financial crisis which has brought about technocratic governments in Greece and Italy, has in fact rekindled the debate on technocracy. Furthermore, as Bourdieu (2002) and Dahl (1994) note, the implications of globalization on the retreat of democracy due to technocratic trends have led to the increased power of international financial institutions and corporations lead by experts.

Centeno (1993:314) defines technocracy as: “the administrative and political domination of a society by a state elite and allied institutions that seek to impose a single, exclusive policy paradigm based on the application of instrumental rational techniques”. This definition is more subtle than previous ones. Centeno emphasizes the imposition of an exclusive ‘policy paradigm’ as the defining element of technocracy. Various authors have in fact identified

a new, *contemporary form* of technocracy referring to the transformed nature of politics (Laird, 1990; Fisher, 1990; Ribbhagen, 2013). These authors highlight the *depolitization* of politics in recent years arguing that technocracy is not so much about *who rules* as the *nature of politics* or as Ribbhagen (2013: 16) puts it: “the crucial issue for the definition of technocracy then is not who governs, rather it lies in the mode of politics”. According to this perspective, technocracy should not be understood as *the rule by experts* but as the *government by technique*, focusing on the procedures and content of politics (Ribbhagen, 2013).

According to Laird (1990:51) contemporary technocracy should not be defined by who *gains* power, but by who *loses* it: “the crucial issue is not who gains power but who loses it. Technocracy is not the rise of experts, it is the decline of citizens”. Fischer (2000:29) adds: “one of the most important contemporary functions of technocratic politics, it can be argued, rests not as much on its ascent to power (in the traditional sense of the term) as on the fact that its growing influence shields the elites from political pressure from below”. Fischer refers to technocracy as a ‘quiet revolution’ which ultimately has transformed the way we think about and understand politics (Fischer, 1990:20), it is a meta-phenomenon geared more to the shape of governance than the content per se (Fischer, 1990:21). Technocratic thinking implies considering that technical solutions can solve social problems, reducing politics to a process of ‘fine tuning’: “problem solving is reduced to a technical matter of plugging solutions into different social contexts” (Fischer, 1990:43). While experts don’t actually govern in this new decision-making paradigm, political parties fight for the support of experts in order to legitimize their own policy inside an increasingly technocratic framework of policy making that is gaining ground within representative democracies.

Ribbhagen (2013) emphasizes that some definitions and measurements of technocracy tend to create a *false dichotomy* between technocracy and democracy. A more accurate dichotomy, she argues, would be the one between a *technocratic mode of reasoning* and a *political mode of reasoning*. The technocratic mode of reasoning emphasises the economic aspects of society accentuating the effectiveness and productivity of desired policies. Technocratic reasoning rejects partisan politics, considering that bargaining, negotiations and compromise lead to sub-optimal solutions and inefficient policy outcomes. Questions of redistribution are of little concern since they are viewed as ‘value-judgments’: “in short, the technocratic mode of reasoning stresses knowledge, facts and figures while emphasizing efficiency, whereas the political mode of reasoning focuses on norms, values and interests in the democratic process” (Ribbhagen, 2013:20). Other authors discuss the technocratic decision-making paradigm without actually mentioning the term ‘technocracy’. Manzer (1984) refers to an ‘elitist planning paradigm’ as opposed to a ‘pluralist exchange paradigm’. While the elitist planning paradigm refers to policymaking as a result of “anticipatory problem solving, synoptic planning and rational choice” (Manzer, 1984: 577), policymaking in the pluralist exchange paradigm is the result of epiphenomenal outcomes of decisions made by individuals or groups interacting with one another” (Manzer, 1984: 577).

In summary, technocracy can be defined in two different manners, distinguishable by

whether they focus on the rise to power of new political actors or whether they focus on the mode and content of politics. The first definition views technocracy as a political system where *experts take key decisions* while the second one refers to a decision-making paradigm characterized by the *technical management of politics*. However, although we differentiate two definitions, one classical and one contemporary, the same basic line of reasoning and approximation to knowledge underlies both concepts. In fact, they both rest on the same *epistemological foundation*, something we will examine closely in the next section.

2.2 The epistemological foundations of technocratic thought

They are particularly inclined to confuse the things of logic with the logic of things

— Bourdieu, *Le Monde Diplomatique*

The epistemological foundations of technocratic thought can be traced back to the writings of Plato. For Plato, social change means degeneration; all things in flux are destined to decay. In order to know anything definite about the world, he claimed, one must study the *ideas*; the ideal forms from which all things in social reality are copied. Since true reality is veiled (all we see around us are imperfect copies of the ideas) the task of the pure knowledge is to describe the true nature of hidden realities (Popper, 2002:27). In the *Republic*, Plato accordingly put forth the idea that the wisest and most godlike men: a kingship of philosophers must rule since they are the only persons who have access to these ideas. Plato's theory on the 'rule of the enlightened' inspired authors whose work is more directly connected to technocratic thought, such as *The New Atlantis* by Bacon (1622). Bacon developed Plato's ideas but envisioned a utopian future where *research scientist* replace the philosopher-kings.

In the eighteenth-century Enlightenment movement more direct epistemological foundations of technocratic thought were rooted. Saint-Simon is often described as the precursor of technocracy (Carlisle, 1974; Fisher, 1990; Ribbhagen, 2013). In the wake of the industrial revolution in France, Saint-Simon developed his utopian vision of a state where a new system of 'expert management' would lead society out of the social crises that had followed the abrupt changes and social uprisings in modern industrialized societies. A new European hierarchy would be established "based not on social origins but on natural talent and society's requirements" (Fisher, 1990: 69). He explained that the new class of technical experts was much more valuable to society than the old ruling class of nobles and aristocrats, and should therefore occupy a more important role in politics. Instrumental importance would lead to political dominance (Laird, 1990). August Comte evoked Saint-Simons ideas when developing his theory of 'positivist knowledge'. Comte differentiated between *real knowledge* and mere opinion, explaining that positive knowledge can only be obtained by applying a universal scientific method to empirical evidence. The scientific method and the verifiability of empirical findings would permit society to discover 'scientific laws' guiding society toward social progress.

As we see, technocratic thought fundamentally rests on the *positivist epistemology*. The

belief in an *objective truth* which can be discovered by observation and the use of a scientific method are the essential characteristics of this theory of knowledge. According to positivists, verified and scientific knowledge is *certain*. Verified knowledge can thus be considered absolute truth while other forms of knowledge are rejected as meaningless speculation (Del Aguila and Beltrán de Felipe, 1995:421). Objective knowledge thus exists independently of us and can be obtained by carefully separating facts and values. Truth is distinguishable for its verifiability unlike subjective arguments which contain no verifiable truth.

Weber (1949) was one of the first to question some of these ideas. He explicitly objected to the idea that rational criteria should determine the *ends* of policy. Centeno (1993:311) describes Weber's critique: "although the choice of means may be justified on a rational basis, the definition of values, goals and needs necessarily involves subjective criteria". Science, Weber argued, cannot liberate the individual from his personal responsibility in choosing his supreme values. Weber also points out that the search for 'general laws' in the realm of social sciences is exceptionally inadequate. In order to establish general laws which aim to reflect something as irrational and unpredictable as human behaviour, a great level of generalization is necessary. The resulting 'laws' are exceedingly abstract and lack any real content, far from portraying the rich reality more qualitative approaches can depict (Weber, 1949).

The two weaknesses in positivist thought detected by Weber much resemble the critiques of technocratic reasoning we encounter today. First, some argue that technocratic arguments confuse ends and means. New instruments for public decision-making, such as cost-benefit analyses are often used in order to defend *what policies* to implement instead of *which manner* would be the best way to implement an already defined goal: "much of policy analysis in this respect has sought to translate inherently normative political and social issues into technically defined ends to be pursued through administrative means" (Fischer, 1998:4). Second, the economic models explaining economic trends and social behaviour which legitimize technocratic policy-making are sometimes so detached from social reality that although the models and equations appear internally coherent, they are not supported by real life examples. Bourdieu explains that many economists "separated from the realities of the economic and social world by their existence and above all by their intellectual formation, which is most frequently purely abstract, bookish and theoretical" confuse the logic of their mathematical models (things of logic) with the actual events in social reality (logic of things) (Bourdieu, 1998). Fisher adds: "neopositivism in its search for such value-neutral generalizations has sought to detach itself from the very social contexts that can give its data meaning" (Fischer, 1998:140).

As we have seen, the positivist approach to knowledge considers that objective truth exists out there and can be obtained through scientific inquiry. If truth is objective, there cannot exist simultaneous incompatible truths. Translated into a political context, two different world-views cannot both be 'right'. Subsequently, if there is a right answer to any given question, there cannot exist any valid alternatives. The question is, if there are no alternatives... can we really talk of democracy?

2.3 Technocracy and democracy: An impossible coexistence?

Truth is not compatible with democracy

— Fernando Vallespín

During the final stages of the Cold War, several authors predicted what they called the ‘end of ideology’ referring to the expected collapse of the Soviet Union and the consolidation of liberal democracies throughout the world. Authors predicting this end of adversarial politics considered that this new era in history would open the doors for democratization and social progress. Arguments about abstract goals would be replaced by fruitful social engineering. Democratic consolidation then, can be associated to the end of traditional politics. Fukuyama (1989) for example wrote in his famous article ‘The End of History?’: “what we may be witnessing is not just the end of the Cold War, or the passing of a particular period of post-war history, but the end of history as such: that is, the end point of mankind’s ideological evolution and the universalization of Western liberal democracy as the final form of human government” (Fukuyama, 1989:1). However, can technocratic politics really be considered an opportunity for democracy? Marcuse (1964:11) writes: “this absorption of ideology into reality does not, however signify the “end of ideology”. On the contrary, in a specific sense advanced industrial culture is *more* ideological than its predecessor, inasmuch as today the ideology is in the process of production itself”. Radaelli (1999) points to the paradoxical fact that political scientists are fascinated by post-adversarial politics but at the same time horrified by technocratic policy-making. How can this be when they are fundamentally the same thing?

The *tensions* between technocracy and democracy have been carefully examined throughout the years. While some scholars affirm relevant frictions between technocracy and democracy others describe the concepts as *dichotomies* arguing that technocracy *by definition* cannot be democratic, because the two concepts cannot overlap and coexist. Carlisle (1974) explains that Saint-Simon is not only known as the precursor of technocracy, but also of totalitarianism. He describes an authoritarian appeal in Saint-Simon’s paternalistic preaching of the virtues of order and authority and argues: “there is an implied equation in the argument between technocracy and totalitarianism” (Carlisle, 1974:451). In the journal *Le Producteur* Saint-Simon’s followers insisted that since real knowledge can be obtained, there is little room for discussion in most spheres of social life. This means that men who *do not* know should obey men who *do* know.

As we have seen in a previous section, technocracy can be understood in the classical sense of the term as the ‘rule by experts’ but also in a more contemporary light as the ‘government by technique’: “the former advocated for a direct rise to power of experts, whereas the latter is formally respectful of democratic values and institutions” (Radaelli, 1999:4). There is an evident contradiction between technocracy understood as the rule by experts and democracy understood as the rule by the people: “democracy means rule by the people (demos) not rule by (technical) experts” (Ribbagen, 2013). In a technocratic regime, experts are appointed as rulers by virtue of their knowledge. This elite of experts is expected

to rule according to what *they* believe to be best for society, not according to the expressed wishes of citizens. *Elitist* authors might argue that democracy inevitably produces governing elites due to organizational necessities. Michels (1915) for example described an ‘iron law of oligarchy’ concentrating political power in a small number of people. Schumpeter (1942) similarly portrayed democracy as the free competition between elites for political power. Nonetheless, even this technical and restricted view of democracy does not render the two concepts compatible. Even if governors were elected from a ‘pool’ of experts fulfilling the democratic requirement of universal active suffrage, *passive suffrage* would be drastically reduced to include only the most highly educated. While it’s true that everybody cannot rule in contemporary democratic systems, *theoretical political equality* is fundamental. As a result, technocracy in the classical sense of the term *cannot be considered* compatible with representative democracy.

When studying the more contemporary definition of technocracy (government by technique), the relationship between technocracy and democracy appears more complex and ambivalent. Ribbagen points out that technocracy understood in this manner does not necessarily oppose democracy, rather it opposes a *political mode of reasoning*. The study of technocracy has recently attracted scholarly attention for its ability to function *within* democratic regimes, without questioning basic political institutions. Nevertheless, claiming that government by technique is compatible with *representative* democracy does not mean that technocratic policy-making cannot undermine democratic quality or create frictions with what some consider fundamental democratic elements such as public participation (Fischer, 1990). Radaelli (1999:3) goes as far as calling technocracy “the dark side of the cognitive dimension of politics” explaining that democracy is based on free consensus and participation none of which technocracies recognize as basis of authority.

In spite of this, some authors argue that technocratic decision-making actually *protects* democracy by defending the general will from the influence of particular interests. Technocratic decision-making shelters socially optimal, efficient policies against inefficient and incremental decisions born from negotiations. In the history of democratic thought the *unity* of the general will of the people has often been emphasised and the heterogeneity of interests ignored. In fact, the term ‘party government’ was, for a long time, considered a negative term “connoting conflicts motivated by personal ambitions of politicians [...] and the pursuit of particular interests, altogether a rather unsavoury spectacle” (Przeworski, 2010:23). Although the democratic ideal has been discussed for centuries, self-governance in the presence of *heterogeneity* was rarely commented upon until the 20th century. For some authors however, ‘partisan politics’ is a vital element for democracy. Classical pluralist such as Dahl (1961) and Truman (1951) explain that elections are not the only channels for democratic participation. Rather the fact that interest groups can mobilize in the defence of their own interests is an essential element in any democratic system. According to this pluralistic theory, power is evenly distributed in society and interest groups and counter-groups have equal chances to mobilize, thus assuring a political equilibrium in society. The main caveat in this *pluralist* theory is, as Lindblom (1977) points out, the fact that some organized interests are

more powerful and have more access to power than others. The ‘structural power of business’ links economic and political power and the politicians’ dependence on economic actors makes them more susceptible to political pressure. This string of thought leads to one of the most important arguments in support of technocratic management of politics: politicians that listen too much to narrow interests can pose an equally large threat to democracy as politicians that ignore interests altogether.

Manzer (1984) explains that while a *pluralist-exchange* decision-making paradigm is guided by *self-interest* and decisions are taken through bargaining and negotiation resulting in inefficient policies, an elitist-planning model assures *self-indifferent* practical reasoning. An elitist-planning paradigm is therefore the best way to assure efficient policy-outcomes and even to protect the interests of minorities whose well-being could easily be overlooked in a battle between strong, organized interests. The central guidance of decision-making toward Pareto optimal solutions is in this sense more ‘moral’ than letting vote-maximizing politicians or budget-maximizing bureaucrats take decisions based on unscientific criteria. Although this argument is relevant, some questions arise: how can an elite presume to know the public good? Is there even such a thing as a common good? And how do we trust that expert knowledge is used in a disinterested manner?

Williams (2006) argues that the tensions between technocracy and democracy are real: exclusionary, top-down decision-making undercut accountability, transparency and weakens checks and balances so fundamental for effective representation. However, technocracy, he explains, can potentially enhance democracy by producing what he calls ‘democratic externalities’ (Williams, 2006:124). For example, he explains, the “executive’s greater technical capacity vis-a-vis the legislature incentivizes Congress to upgrade its own technical capacity, bolstering horizontal accountability and effective representation in progress” (Williams, 2006:131). The idea that expert knowledge can be used in such a way as to *improve* political debate instead of *ending* it is undoubtedly interesting and probably fundamental if we wish to gear decision-making toward more participatory dynamics. Pettit (2004:54) for example argues that deliberative democracy *requires* depolitization and that depolitization is in fact consistent with democracy.

To conclude, while the rule by experts is incompatible with representative democracy, the government by technique functions within democratic societies. As discussed, some even argue that technocracy understood as the technical management of politics enhances democracy by protecting the ‘public interest’ from ‘sectarian interests’. One problem with this chain of reasoning however is that expert knowledge is not necessarily neutral, or at least, as we shall see in the next section, is not always used for neutral purposes.

2.4 The political use of knowledge

Although *expertise* and knowledge are fundamental elements for increasing the quality of decision-making and democracy, supporters of technocratic decision-making often overlook two fundamental questions: (1) In a technocratic paradigm, the limits between *means and*

ends are easily blurred. Criteria such as efficiency and effectiveness don't only guide the implementation of policy but become goals in themselves, thus reducing political goals to questions of technical adjustment. (2) Although technocrats deny allegiance to any ideology or interests, "expertise itself turns out not to be the neutral, objective phenomenon that it has purported to be. Indeed, it has all too often served the ideological function of legitimizing decisions made elsewhere by political rather than scientific means" (Fischer, 2000:8). From this point of view, technocracy can be understood not only as the *depoliticization of politics*, but as the *politicization of expertise*. The neutrality of empirical evidence disappears once it is used to win political battles: "perhaps in one sense data can be neutral (and thus speak for themselves), but as soon as they are introduced into a political process, all such claims must be abandoned" (Fischer, 1990:169). Some authors have argued that the lack of neutrality in scientific research can be explained by contextual and cultural factors. Mannheim (1936) and other authors dedicated to the study of the *sociology of knowledge* explain that neutral or objective knowledge simply doesn't exist. Cultural and social contexts condition knowledge and even technical specialists participate in conflicting social forces binding them to a partisan view of the world. Other authors argue that the politicization of expertise is not so much about unconscious and contextual influences as the result of deliberate strategies of powerful actors. Radaelli (1999:17) points out that "knowledge always enters the policy process in combination with interests, never alone", Habermas (1987) argues that technocratic politics serve an end by concealing unreflected social interests and Crouch (2012) explains that although technocratic discourse finds legitimacy by claiming to reject partisan interests, the entire discourse is geared toward fulfilling one set of particular interests; the wishes of global firms and corporations.

The *political use of expert knowledge* has been an area of interest for contemporary authors such as Boswell (2009) and Fischer (1990). Both authors agree that expertise is often used, not in order to improve decision-making, but to serve political interests in some form or another. Technocratic reasoning and expert knowledge are used in politics as a means to end debate about intrinsically political and value-laden questions. Instead of using ideological arguments, aiming to attract the vote of people with certain values or interests, the technocratic discourse aims to set itself above ideological debate claiming the capability to 'prove' what policies will be the best for society as a whole. According to Lemke (2009:9) "technocratic discourse does not wish to be read as just one more opinion regarding policy. It wishes to place itself 'above the fray', as a supplier of 'facts', neutral and objective". Politicians search for the support from 'experts' who can produce scientific results permitting politicians to end political debate about controversial issues. By showing proof of *what works* people's opinions are trivialized.

Boswell (2009) explains that the fact that decision-making has become more and more technocratic cannot only be explained by the increased complexity of policy-making but also by the fact that several political parties rely on technocratic discourse as a source of legitimacy and credibility. Hence, the use of expert knowledge cannot only be viewed as *instrumental* (as a means for advancing certain rational organizational goals) but also as

a source of *legitimation* and *substantiation*. Unable to inspire support through adjusting their output (improving the economy for example), political parties often resort to rhetoric to gain support and legitimate their actions. Expert knowledge thus helps demonstrate the rationality of an organizations decision-making style (Boswell, 2009:87). Political actors also use knowledge to substantiate their actions by persuading citizens through technocratic forms of argumentation “or at least to deploy evidence that renders opposition to their preferences less tenable” (Boswell, 2009:73).

Fischer (1990) argues that some political parties tend to use expert knowledge for political purposes more than others. By studying the use of expert knowledge before and after the implementation of policy he finds that scientific requirements for policy-making often benefit market-friendly or conservative parties. *Cost-benefit analyses* is a mode of applying expert knowledge to politics prior to policy-implementation. According to Fischer, demanding cost-benefit analyses for the implementation of policies imposes an ‘economic grid’ on all policy decision-making and “subverts the use of noneconomic – social and political – criteria in the regulatory decision-making process” (Fischer, 1990:166). The influence from private sector managerial theories has drawn the attention to ‘public management’ and increasing amounts of policy-makers view the public sector as a sort of ‘enterprise’ to be managed according to private-sector principles. Showing that a certain policy will work efficiently provides more legitimacy for the implementation of a policy than its appeal to public interest. What’s more, studies measuring the benefits of programs oriented to fulfil social needs often underestimate social benefits since these are not easily measured in quantitative terms. According to Fischer, cost-benefit analyses thus benefit right-wing parties by emphasising traditional capitalist values and facilitating deregulation (Fischer, 1990:165). During the Reagan administration, the cost-benefit analysis was diligently used on proposed *regulatory* policies in an attempt to impede their implementation.

In a similar fashion, Fischer explains that ex-post *policy evaluations* have permitted right-wing politicians to maintain the statu quo and hinder the continuation of already implemented progressive programs. Requiring proof that social programs really work makes it much harder to introduce elements of social change. Fischer explains that since proving that a policy works at times can be extremely difficult due to the complexity of policy problems and the imperfect knowledge at hand, evaluation findings tend to be negative. ‘Verifying’ that a certain program really works is much more difficult than proving that it does not: “an emphasis on evaluation builds a conservative bias into the policy decision processes” (Fischer, 1990: 163). In brief, the use of technocratic discourse and methods could be understood as ideological strategies, often favouring parties from the right wing, partly by generating electoral support and partly by advancing their specific interests.

Chapter 3

Hypotheses

The purpose of this paper is to study *technocratic attitudes*. As previously mentioned, there have been several attempts to measure technocratic attitudes among civil servants and highly educated individuals in the past (Putnam, 1977; Greenwald, 1979; Ribbhagen, 2010), however, to our knowledge, no attempts have been made to measure *public support for technocratic decision-making* by studying the technocratic attitudes among normal citizens. Our wish is to contribute to a scientific theory of technocracy, not by studying political institutions or procedures of decision-making, but by looking at people’s attitudes toward politics, participation and policy making. When measuring civic culture in the 60’s, Almond and Verba (1963:10) explained: “rather than inferring the properties of democratic culture from political institutions or social conditions, we have attempted to specify its content by examining attitudes in a number of democratic systems”. In a very similar way we attempt to learn more about technocracy by studying technocratic attitudes in post-industrialised societies. By explaining technocratic attitudes among people from the OECD countries, as well as by considering how technocratic attitudes might affect people’s political behaviour, we aim to advance the research on technocratic mentality.

The literature suggests that *education* is fundamental for technocratic thinking. Since technocracy defends a more prominent and dominant role for expert knowledge in society and politics, it is assumed to be natural that individuals with a higher level of expertise support technocratic decision-making. The first part of our empirical section will test this assumption. The second part of our empirical section will look at the relationship between technocratic attitudes and political behaviour such as voting and party preferences in an intent to shed some light on the political consequences of technocratic mentality. While our first section studies technocratic attitudes as a dependent variable, the second section looks at technocratic attitudes as an independent variable:

$$Education \rightarrow Technocratic Attitudes \rightarrow Political Behaviour \quad (3.1)$$

First of all however we must outline what we mean by the concept ‘technocratic attitudes’. As we have seen, the literature suggests that technocracy should not only be understood as a political system in which experts rule, but also, and currently more importantly,

as a decision-making paradigm compatible with representative democracy. Our first task is therefore to define what we mean by technocratic attitudes. In accordance with the literature we distinguish between two ‘types’ of technocratic attitudes. The first reflects the support for technocratic government as defined by early theories, the other, reflects the support for technocratic decision-making as defined by more contemporary studies.

Definition 1 = *Support for the rule by experts*

Definition 2 = *Support for government by technique*

While the first definition expresses the wish for decisions to be made by experts, not government, the second definition describes a preference for the technical management of politics, prioritizing rational policy planning over more pluralistic and participatory forms of policy-making. Once these definitions are clear, a second goal for our study becomes evident. Not only do we wish to study the relationship between education, technocratic attitudes and political behaviour, we also wish to study the empirical differences between our two definitions of technocratic attitudes. One of the main theoretical differences between the two definitions of technocracy is that the more contemporary definition is assumed to be compatible with and functioning within representative democracy. When studied empirically, will the theoretical distinction discussed be revealed? For example, while we assume that supporters of *anti-democratic* technocracy show no support for representative democracy and tend to abstain from democratic processes, we expect that supporters of the *democratic* form of technocracy very well might participate.

In summary, we identify three relationships of interest in our study namely the relationships between technocratic attitudes and (1) education, (2) political behaviour and (3) democracy. While our first empirical section which aims to explain technocratic attitudes focuses on the relationship between education and technocratic attitudes, our second empirical section which studies the political consequences of technocratic attitudes concentrates on the relationship between technocratic attitudes and political behaviour. The relationship between democracy and technocracy will be discussed in both parts.

3.1 Education and technocratic attitudes

When attempting to explain technocratic attitudes we wish to study the relationship between education and technocratic attitudes. Since it is assumed that only experts have technocratic attitudes, previous studies have concentrated on studying technocratic mentality among highly educated individuals. This study however will examine if variations in the level of expertise can explain technocratic attitudes¹. According to conventional wisdom technocracy is an ‘ideology of the highly skilled’. Greenwald (1979:632) points out that “in debate filled

¹One may ask whether a high level of education naturally implies a high level of expertise. Putnam considers this to be the case: “given the curricular specialization characteristic of most European universities, a university degree represents considerable disciplinary commitment and expertise” (1977:389).

with untested assumptions, many theorists imply that technocratic ideology appeals strongly to those who occupy the top strata of science and technology". Burnham (1941) for example calls technocracy a 'managerial ideology', shared by technically qualified individuals, and Habermas (1987) refers to technocracy as the ideology of the socially advantaged in the professional community. In spite of these claims, other theories and ideas make us doubt whether this really is the case. Greenwald comments: "technocracy seems unlikely to enjoy the universal support of experts [...] fragmentary and indirect evidence, though, suggest that technocratic thought may be anything but an ideology of highly advantaged professionals and top managerial personnel" (Greenwald, 1979: 632).

When looking at our first definition of technocratic attitudes (rule by experts) theories on democratic support contradict the conventional assumption that education leads to technocratic mentality. Since this definition measures the support for, what we consider, an intrinsically anti-democratic regime, it is highly probable that supporters of the rule by experts have what we might call *anti-democratic values*, opposed to representative democracy. There is a relatively large consensus among academics that poor and less educated people in developed countries have less democratic values (Almond & Verba, 1967; Lijphart, 1997). Maslow's theory describing a 'hierarchy of needs' explains that less affluent people are more preoccupied with urgent materialistic needs and consequently care more about economic outcomes of policy (such as growth) than democratic procedures. Inglehart (2000) similarly emphasises that people with less knowledge and less economic security tend to have what he calls *survival values* rather than *self-expression values*. If lower levels of education are indeed related to anti-democratic values, we would expect to see *a negative relationship between education and the support for the rule by experts* (H_1).

This argument rests on the assumption that the effects of education on the support for the rule by experts are *indirect*; the relationship is mediated by anti-democratic values. As argued, the technocratic attitudes in question are strongly associated to anti-democratic values which are in turn often shown to be related to education. If the relationship between education and the support for the rule by experts is indeed explained by anti-democratic values, we should not expect education to have any effect on these technocratic attitudes once we control for anti-democratic values.

$$Education \rightarrow Anti-democratic\ values \rightarrow Support\ for\ the\ rule\ by\ experts \quad (3.2)$$

When looking at our second definition of technocratic attitudes (government by technique) we see no clear contradiction between the support for representative democracy and technocratic attitudes. Consequently we do not expect anti-democratic values to mediate the relationship between education and the support for government by technique. This however does not mean that no relationship between education and the preference for the technical management of politics will be observed. We can think of two alternative theories to describe the mechanisms through which a *direct* effect of education on the support for government by technique could take place. (1) As conventional wisdom has it, people with more expertise defend the dominant role of expert knowledge since it gives them a more influential role

in society. Therefore *higher levels of education lead to stronger support for government by technique* (H_2). (2) People with less expertise have less capacity to question what technocrats present as ‘true’ and are therefore more inclined to believe in the effectiveness of their proposed policies. In consequence *lower levels of education lead to stronger support for government by technique* (H_3).

3.2 Technocratic attitudes and political behaviour

The second part of our empirical section studies the effects of technocratic attitudes on political behaviour. For instance, do we expect supporters of technocratic decision-making to support political parties from a specific ideology? Let’s first look at the support for *government by technique*. As we have seen in previous chapters, technocratic reasoning is not value-free and neutral although it is presented as such: “the notion that the technocratic set of criteria may be structured in such a way that they benefit a particular group is not only possible but also probable. The important point here, however, is that the public discourse of technocracy rejects such a linkage” (Ribbhagen, 2013:22). Many associate contemporary technocracy with a subtle political strategy of the right wing. Although it would be an error to claim that only right-wing parties use a technocratic discourse for political purposes, Reagan and Thatcher set the trend as early as the late 70s with their lemma ‘there is no alternative’: “the adaption of technocratic decision techniques to the pursuit of the conservative agenda proved to be a key strategy of the Reagan Revolution” (Fischer, 1990:26). Authors such as Bourdieu associate technocratic thinking with neoliberal policies defending free capital flows. Globalization, Bourdieu writes “is the effect not of economic inevitability but of conscious and deliberate policy [...] it is a policy of depolitization” (Bourdieu, 2002:31). Centeno remarks that “there may be a certain affinity between technocracy and market capitalism [...] capitalism legitimizes itself partly by reference to the apparent efficiency of its economic mechanisms. This is precisely the type of argument that is most conducive to technocratic support” (Centeno, 1993: 311). Fischer agrees and highlights that the conflict between efficiency and participation fits into the left-wing ideological spectrum. While the left wing often calls for more democracy and participation, the right wing will often defend efficiency over participation. As a result, it is reasonable to expect that *people who support government by technique will show support for right-wing parties* (H_4).

When looking at the support for the rule by experts, the theoretical connection between technocratic attitudes and the preference for right-wing parties is less clear. There is no clear link between classical technocracy and party preference. The important point here is that no political party stands for elections proposing to hand over their political power to unelected officials. There is therefore no reason why people who support the rule of experts would vote for one party or another. That is, *people who support the rule by experts don’t prefer specific parties over others* (H_5).

Finally, *voting abstention* is an interesting variable when exploring the political implications of technocratic attitudes. It may also be a central variable for studying the differences

between technocratic attitudes and their connection to democracy. An intuitive hypothesis is that *people who support an undemocratic rule by experts are more likely to abstain from voting in elections* (H_6). After all, they show little support for basic democratic ideals and show no regard for public participation in policy-making. Supporters of government by technique, on the other hand, could very well participate, seeing that they are not questioning the general framework of contemporary democratic societies. Although we expect these individuals to dislike partisan activity, interest-group politics and a more pluralistic form of politics, there is no reason why they should disrespect or dislike democratic governance. Consequently, a credible hypothesis would be that *people who support government by technique are as likely to participate in elections as others* (H_7).

Chapter 4

Research Design

4.1 Method and data

When fashioning our research design, our primary sources of inspiration come from individual data level studies which analyse the social factors explaining political attitudes such as Almond and Verba (1963), Inglehart and Baker (2000) and Evans and Rose (2007) as well as studies aspiring to measure technocratic mentality such as Putnam (1977), Greenwald (1979) and Ribbhagen (2010). The first group of studies teach us important lessons on how to design an attitudinal study and what factors to take into account. The second group of studies helps us operationalize technocratic attitudes in order to empirically measure this complex concept.

We chose to work with data from individuals residing in the OECD countries in view of the fact that technocracy is a concept very much associated with advanced industrial societies. As an objective is to examine technocracy in representative democracies, the democratic OECD countries provide a natural setting. In order to measure the technocratic attitudes of individuals in the OECD countries we use data collected by the *World Values Survey*¹. We use an aggregate data set of all the *five waves* of this survey² obtaining a large data set of approximately 60.000 observations. We chose to work with this aggregated data set mainly because it permits us to check whether or not we observe similar tendencies over time. By controlling for time fixed effects in our multivariate regression models we can make sure that the same explanatory variables are related to technocratic attitudes independently of the specific time period when the survey was conducted.

We use *multivariate regression models* in order to measure the effect of our independent variables on our dependent variables. In the first part of our empirical section we look at the effect of education on technocratic attitudes, taking into account other important factors which might be related to both variables. We estimate a reduced form regression that takes the form:

¹www.worldvaluessurvey.org

²The waves of the survey are: 1981-1989, 1989-1993, 1994-1999, 1999-2004, 2005-2007. The data from the most recent wave were published on the 30th of April 2014 and could not be used in this study.

$$TA_{ijw} = C_j + T_w + \beta education_{ijw} + \zeta X_{ijw} + \epsilon_{ijw} \quad (4.1)$$

where TA_{ijw} represents technocratic attitudes for individual i in country j in wave w , C_j represents country fixed effects, T_w refers to wave fixed effects, X_{ijw} refers to a matrix of controls, and ϵ_{ijw} is the error term. When our dependent variable is categorical, we use *binary logistic regressions* to produce *odd ratios*. When our dependent variable is continuous, we use *ordinary least square regressions* to estimate our model. In the second part of our empirical section we use technocratic attitudes as an independent variable when estimating their effect on political behaviour. We estimate the following regression:

$$PB_{ijw} = C_j + T_w + \beta TA_{ijw} + \zeta X_{ijw} + \epsilon_{ijw} \quad (4.2)$$

where PB stands for political behaviour representing voting abstention and ideological party preference³.

4.2 Dependent variables

In the first part of our empirical section our *conceptual dependent variables* are technocratic attitudes understood as (1) the support for a rule by experts, and (2) support for government by technique. Operationalizing our first definition is quite straightforward. Variable number E115 of the World Value Survey asks:

Is having experts, not government, make decisions according to what they think is best for the country a very good, good, bad or very bad option?

This variable captures the support for decision-making by experts, independently of the democratically chosen politicians. We collapse the responses into two values where 0 includes the responses ‘very bad’ and ‘bad’ (not technocratic) and 1 includes the answers ‘good’ and ‘very good’ (technocratic)⁴. Operationalizing our second definition is more difficult. We create an index called the ‘technocratic mentality index’ drawing on a previous index created by Putnam (1977). It is a continuous variable taking on values ranging from 0 to 1.

When measuring the implications of having technocratic attitudes in the second part of our empirical section our conceptual dependent variables are *voting abstention* and *ideological party preference*. By ideological party preference we mean the ideological position of the political party to which the respondent feels the closest to and intends to vote for. The data used to measure the respondents ideological preferences come from the *Comparative Manifesto Project*⁵. The project makes quantitative content analyses of political parties’ electoral programs and (among other things) attribute a value to each party on a right-left

³When analysing ideological party preference we do not use wave fixed effects since, in this case, we only work with data from the last wave of the survey.

⁴Descriptive statistics for all variables can be found in the appendix B.

⁵<https://manifesto-project.wzb.eu/>

ideological scale. We have created a new variable by using the normalized *Rile Index* from the Manifesto Project. Variable E179 of the World Value Survey indicates what party the respondents say they would vote for as a first choice. By recoding all of these parties by their score on the rile index, attributing a number between -1 and 1 to every party, we are able to study the ideological preferences of the respondents. Although the World Values Survey collects data on the respondents' ideological self-positioning, what we are interested in studying is not the respondents' auto-perceived ideology (which in any case is a very subjective notion), but their political behaviour measured in terms of party preferences. Recoding the political parties by their score on the ideological index is, above all, an efficient way to make a universal cross-country scale permitting us to compare party preferences across countries.

Finally we measure abstention by converting the original variable E179 measuring vote intention into a binary variable where 0 stands for voting for any party and 1 stands for not wishing to vote for any party. This operationalization has obvious limits; it only measures the abstention of those individuals who admit that they don't intend to vote. This produces an important selection bias by only taking into consideration 'honest abstainers'. The World Values survey does not, however, supply any other measure for voting abstention.⁶

4.2.1 Creating the 'technocratic mentality index'

Measuring technocratic attitudes, understood as the support for government by technique, is not a simple task. The idea is to try to discern a specific 'mentality' among individuals; a positive attitude toward decision-making based on the reasoning that there are optimal solutions to social problems, that efficiency and effectiveness are goals in themselves and that expert knowledge and the scientific method will assure social progress. As discussed in the previous chapter, there have been several attempts to measure 'technocratic mentality' in the past. Drawing on the 'technocratic mentality index' created by Putnam (1977) and later adapted and used by Ribbagen (2010) we create a new index from the variables available to us in the World Values Survey, adapted to apply to the public at large. Our technocratic mentality index is made up by the variables seen in table 4.1.

| Variable label |
|---|
| Politics important |
| Interest in Politics |
| Political action: Signing a Petition |
| Future changes: more emphasis on technology |
| Aims of respondent: first choice (stable economy) |
| Wealth Accumulation (sum-positive solutions) |

Table 4.1: Variables in technocratic mentality index

Though Putnam measured technocratic mentality in the 70's and did not distinguish between a classical and contemporary understanding of technocracy, his description of what constitutes a technocratic mentality is very much in line with how we believe a supporter

⁶This specific methodology has been used in other academic papers. See Karp and Banducci (2006).

of technocratic decision-making should be described. His index looks to decipher *how* individuals think about decision-making and does not refer to *who* should rise to power or take key decisions. Ribbagen (2010) later uses the same index explicitly claiming to study technocracy understood as the government by technique. We make a couple of adjustments in order to improve the validity of the index, but remain relatively true to Putnam's original.

Putnam develops five indicators in order to measure this specific mentality. First he explains that an individual with a technocratic mentality will have a *negative attitude toward politics*. An individual with a technocratic attitude believes that "technics must replace politics" and is "likely to regard processes of negotiation and compromise among interest with a certain contempt" (Putnam, 1977: 385). The first two variables of our 'technocratic mentality index', which discern whether politics is important for the respondent and whether the respondent is interested in politics, aim to capture this negative attitude toward politics. Second, Putnam describes a polarity between *neutrality versus advocacy*. An individual with a technocratic mentality is "free from political attachments" and "abstains from partisan activities" (Putnam, 1977:386). Abstaining from partisan activity does not have to mean abstaining from all political participation such as elections; rather it refers to abstaining from what we might call 'partisan politics' or 'pressure politics'. An individual who supports technocratic decision-making will frown upon interests groups intervening in the political process and abstain from participation in demonstrations or signing petitions since he believes such activities will interrupt rational policy planning. Decisions should be made according to the prescriptions of scientific knowledge, not by the pressure exercised by the uninformed. Our third variable, which checks whether or not the respondent has ever signed a petition tries to capture this notion. Third, Putnam develops an indicator which looks at *technique versus politics*. He explains that "the technocrat is strongly committed to technological progress and material productivity" (Putnam, 1977: 387). Our fourth variable measures whether or not the respondent looks positively upon technological progress, measuring this commitment and belief in the value of scientific advance. Finally Putnam measures political *elitism* explaining that individuals who share a technocratic mentality "lack sympathy for popular participation in government" (Putnam, 1977: 398). A technocrat is no friend of openness or of the equality of political democracy since public participation won't increase the quality of decision-making. Our sixth variable measures whether the respondent values materialistic goals such as controlling inflation over giving people more to say in public decisions.

Putnam also argues that: "the technocrat is sceptical and hostile toward politicians and political institutions": individuals with a technocratic mentality "view politicians as venal, incompetent or impotent [...] by the nature of things, committed either to an ideology or to a sectional interest" (Putnam, 1977: 386). Although we could include this indicator by measuring the 'confidence in political parties' we don't consider it to be a valid indicator of contemporary technocratic mentality. Supporters of technocratic decision-making accept, even respect politicians and political institutions, they just wish them to take decisions according to a technocratic framework. What we aim to measure is not the disaffection

with politicians, rather the disaffection with traditional partisan politics. Bearing this in mind, we swap this variable for another one which perhaps better represents the support for contemporary technocracy. This sixth variable attempts to measure the belief of the respondent in *sum-positive solutions*. Does the respondent consider that policy change always creates winners and losers, or does he/she believe that most policies have optimal solutions? According to Radaelli (1999:7) the emphasis on positive-sum games is consistent with the essential thrust of the technocratic mentality. The question whether the respondent believes that people can only get rich at the expense of others or whether wealth can grow so there's enough for everyone is meant to capture this attitude.

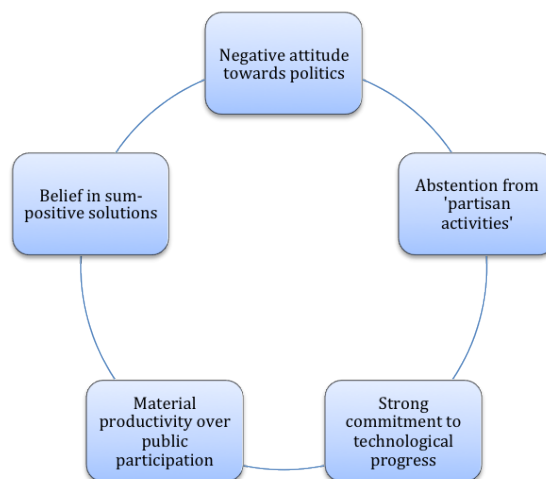


Figure 4.1: Technocratic mentality

4.3 Independent and control variables

In the first part of our empirical section our main independent variable is *level of education*. Conceptually we are interested in how knowledge and expertise relate to the support for technocratic decision-making. Question X025R of the World Value Survey permits us to operationalize the variable. It is an ordinal variable and has three categories ranging from ‘education lower’ to ‘education middle’ and ‘education upper’.

When choosing what control variables to use we draw on previous research of political attitudes. Evans and Rose (2007) explain that when measuring social factors related to democratic attitudes the most important control variables to include in a multivariate regression model are “those socio-demographic attributes that could, independently of educational level, cause citizens to have a more or less supportive attitude towards democracy” (2007: 9). Effectively, we primarily wish to study the effect of education on technocratic attitudes. Omitting other variables which might explain technocratic attitudes is not necessarily a severe problem, as long as these other variables are not also related to education. We have therefore tried to include any key variables which may be related to both education and technocratic attitudes. We include *income* and *occupation* as socioeconomic control variables. The socioeconomic background of the respondents’ may very possibly affect their

technocratic attitudes. Although this effect undoubtedly is interesting, our *main* interest is the relationship between knowledge and technocratic support, independently of socioeconomic status. Controlling for income permits us to talk about education less as a proxy for socioeconomic background and more as an indicator of expertise. Controlling for occupation is also important. Some argue that the ‘type of training’ rather than the level of training is fundamental. Since occupation directly depends on the type of training one has received we include it in our matrix of controls.

Next we control for demographic variables. *Age* for example could be related both to education and technocratic attitudes, the same goes for *gender*. Since we are working with data from respondents from many different countries and during five different time periods, we also wish to control for the effects of ‘country’ and ‘wave’. By using *country and time fixed effects* we make sure that the relationships we see in the data exist independently of time-invariant country specific characteristics as well as specific time-related incidents such as economic recessions.

Finally, we add a control variable for ‘anti-democratic values’ in our regression. As explained, we wish to study the relationship between education, anti-democratic values and technocratic attitudes. We are primarily interested in attitudes which show an opposition to *representative democracy*, (more subtle democratic attitudes are less helpful to us since we don’t believe them to vary considerably among both types of technocratic attitudes). We use variable E114 from the World Values Survey which asks whether the respondent thinks that “*having a strong leader who doesn’t have to bother with parliament and elections is a ‘very bad’, ‘bad’, ‘good’ or ‘very good’ option*”.

In the second part of our empirical section our two variables measuring technocratic attitudes serve as independent variables explaining political behaviour. The point here is to analyse the political implications of technocratic attitudes and see if we can further differentiate the technocratic supporters by analysing their behaviour. We include the same demographic control variables as in the previous multivariate regressions. We control for age, gender and country and time fixed effects considering their possible relationship with both the independent and dependent variables⁷. We also include the socioeconomic control variables: education, income and occupation for the same reasons. In the final models we also add our anti-democratic control variable in an attempt to see whether technocratic attitudes affect abstention independently of anti-democratic values.

4.4 Methodological concerns and robustness

Although we control for various factors which might be related to both our independent and dependent variables the risk for an ‘omitted variable bias’ is still at large. Since we are working with survey data, not all variables we might wish to study are available. For instance, the attitudes of the respondents’ parents could affect both the education level of the respondent and his specific set of attitudes. If this were so, our coefficients would actually

⁷When looking at ideological party preferences we use data only from 2005 and therefore do not check for time fixed effects.

be capturing the effect of an omitted variable rather than the variable under study. Without a fully specified theoretical model it becomes impossible to say in which direction this bias will run. As can be seen in our tables of results in the next chapter, the R-square statistic for our models tends to be quite low; it rarely exceeds 0.250. This might indicate that we have left out various important variables while constructing our models⁸. We are very aware of these problems but our empirical exercise is based on both rich existing literature and our careful discussion on the theoretical channels through which education could affect technocratic attitudes. Therefore, although our results should be interpreted with caution, we believe that they cannot be purely attributed to such a bias.

Another concern when working with survey data is the risk of untruthful answers. It is sometimes claimed that well-educated respondents hesitate when answering questions relating to their political behaviour since they feel more social pressure to behave as a *civic* citizen. Such an effect could affect our results by introducing a systemic bias in the respondents' answers. For example, when measuring voting abstention, only 2% of the respondents admit they do not intend to vote for any party, when real figures for voting abstention in the OECD countries are much higher. To a certain extent, we therefore end up comparing people who admit they are not going to vote with people who claim they will, but end up not doing so. The reader should therefore be aware of these limits when interpreting the results.

When looking at the effect of technocratic attitudes on party preferences, there is an inevitable risk for reverse-causality. The preference for a right-wing party and the exposure to this party over time may lead to a more positive view of technocratic decision-making. Again, the reader should be aware of this when interpreting the results.

Another concern has to do with our technocratic mentality index. Are we really measuring what we have set out to measure? We have tried to address potential validity problems by carefully justifying all variables included in the index referring to previous literature and conceptual arguments. When operationalizing the index we wish to address reliability concerns. The index can be constructed in different ways and we want to make sure that the results do not depend on the specific way we chose to measure our index. We have therefore constructed three different indexes all including the six variables. Index number 1 was created by attributing a value of either 0 or 1 to the possible answers of the questions. For example an individual with little or very little interest in politics, or who never has signed a petition receives a 1 in each respective question. When constructing Index number 2 we simply made sure all scales were oriented in the same direction (less to more technocratic) and then divided all variables by their maximum value. Index number 3 was created in the same way as Index 1 only using a more restrictive criterion when establishing what counts as having technocratic attitudes. In order to avoid being tiresome in the presentation of our results, we present the results using one index (number 1). All other results are shown in

⁸However, the relatively low value of this statistic might also be attributed to the great variation in the contestants' responses. We are after all working with *attitudinal data* at times with as many as 60.000 observations. It is to be expected that a large amount of the variation in our dependent variables cannot be attributed to any independent variable.

the appendix A. The results remain very similar and the correlation coefficients between the different indexes are high and significant ⁹.

Finally, when adding control variables to our regression models the number of observations sometimes decreases quite significantly. In one case, the R-square statistic even decreases when adding a final variable as a result of this. As a robustness check we have therefore re-estimated the relevant coefficients with the smallest sub-sample in each case. The coefficients remain very similar and we choose not to present them in the tables.

⁹See appendix C for the correlation coefficients.

Chapter 5

Results

5.1 Explaining technocratic attitudes

Table 5.1 shows the results of our first logistic regression. The coefficients show if a specific group is more or less likely to have technocratic values as compared to the reference group. In this case, we see that there is a smaller likelihood that individuals with higher levels of education show support for the rule by experts. Column (1) presents the logistic coefficient of education on technocratic attitudes. The coefficient is seen to be negative and statistically significant at the 1% level. Since the size of the coefficients are hard to interpret, we calculate *odd ratios* for the coefficients and present them inside the square brackets underneath the standard errors. In this case, our model predicts that the odds of having technocratic attitudes decrease by almost 40% for a person from the highest group of education as compared to a person from the lowest group. Column (2) includes our socioeconomic control variables: income and occupation. Column (3) additionally controls for demographic variables. While holding constant the control variables, the parameter estimates for education remain negative and significant. Column (4) finally adds the attitudinal control variable to our model. As we can see, and as predicted, the anti-democratic variable captures the effect of education to a large extent. The hypothesis that people with a lower level of education are more likely to support the rule of experts because they have anti-democratic values is supported by the data.

Table 5.2 shows the results of our ordinary least square regression studying the effect of education on the support for government by technique measured by our technocratic mentality index. Column (1) shows the effect of education on our technocratic index. We see that when the level of education passes from lower (reference group) to higher, the predicted value of our dependent variable falls by -0.185. That is, contrarily to what conventional wisdom claims, individuals with lower, not higher levels of education show support for the contemporary definition of technocracy. Column (2) additionally controls for income and occupation. Income is also seen to have a negative and significant coefficient. As we can see, education is far from being the only variable explaining variation in technocratic attitudes. Variables accounting for the respondents' socioeconomic background (including education) account for 12% of the variation of the dependent variable. Column (3) adds the demographic control

Table 5.1: Education and Support for Rule by Experts (Logistic regression)

| | <i>Dependent variable:</i> | | | |
|--------------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|
| | Support for the rule by experts | | | |
| | (1) | (2) | (3) | (4) |
| [Ref. Education lower] | - | - | - | - |
| Education Middle | -0.168*** (0.020) [0.846] | -0.080*** (0.026) [0.923] | -0.108*** (0.029) [0.898] | -0.041 (0.030) [0.960] |
| Education Upper | -0.494*** (0.023) [0.610] | -0.323*** (0.032) [0.724] | -0.257*** (0.035) [0.773] | -0.067* (0.037) [0.935] |
| [Ref. Income Lower] | | - | - | - |
| Income Middle | | -0.063** (0.025) [0.939] | -0.075*** (0.026) [0.928] | -0.013 (0.028) [0.987] |
| Income Higher | | -0.267*** (0.028) [0.766] | -0.125*** (0.030) [0.882] | -0.048 (0.032) [0.953] |
| Occupation | | Yes | Yes | Yes |
| Female | | | 0.103*** (0.022) [1.109] | 0.108*** (0.024) [1.114] |
| Age | | | -0.007*** (0.001) [0.993] | -0.007*** (0.001) [0.993] |
| Wave fixed effects | | | Yes | Yes |
| Country fixed effects | | | Yes | Yes |
| [Ref. Strong leader very good] | | | | - |
| Strong leader fairly good | | | | -0.352*** (0.051) [0.703] |
| Strong leader bad | | | | -1.314*** (0.049) [0.269] |
| Strong leader very bad | | | | -1.811*** (0.049) [0.163] |
| Observations | 56,767 | 39,998 | 39,937 | 38,962 |
| Log Likelihood | -39,361.640 | -27,695.560 | -26,381.510 | -24,248.520 |
| Akaike Inf. Crit. | 78,729.280 | 55,427.130 | 52,853.030 | 48,593.050 |

Note:

*p<0.1; **p<0.05; ***p<0.01

Table 5.2: Education and Support for Government by Technique (OLS)

| | <i>Dependent variable:</i> | | | |
|--------------------------------|---|----------------------|------------------------|-----------------------|
| | Support for government by technique (Index 1) | | | |
| | (1) | (2) | (3) | (4) |
| [Ref. Education Lower] | - | - | - | - |
| Education Middle | -0.109*** (0.002) | -0.073*** (0.003) | -0.060*** (0.003) | -0.055*** (0.003) |
| Education Upper | -0.185*** (0.002) | -0.131*** (0.003) | -0.105*** (0.004) | -0.095*** (0.004) |
| [Ref. Income Lower] | | - | - | - |
| Income Middle | | -0.014*** (0.003) | -0.016*** (0.003) | -0.015*** (0.003) |
| Income Higher | | -0.050*** (0.003) | -0.025*** (0.003) | -0.023*** (0.003) |
| Occupation | | Yes | Yes | Yes |
| Female | | | 0.016*** (0.002) | 0.012*** (0.002) |
| Age | | | -0.0004*** (0.0001) | -0.001*** (0.0001) |
| Wave fixed effects | | | Yes | Yes |
| Country fixed effects | | | Yes | Yes |
| [Ref. Strong leader very good] | | | | - |
| Strong leader fairly good | | | | -0.010** (0.005) |
| Strong leader bad | | | | -0.036*** (0.004) |
| Strong leader very bad | | | | -0.066*** (0.004) |
| Observations | 69,604 | 47,759 | 47,682 | 40,293 |
| R ² | 0.080 | 0.122 | 0.224 | 0.221 |

Note:

*p<0.1; **p<0.05; ***p<0.01

variables. The effect of education remains negative and significant while controlling for all other variables such as country, age, gender and wave¹. Although the effect appears to be smaller when controlling for other variables, it remains substantial and significant². Finally, column (4) adds the anti-democratic attitudinal variable. Although anti-democratic values affect technocratic mentality, the effect of education remains significant while controlling for this variable indicating a direct effect of education on the support for government by technique, independently of the anti-democratic variable.

Different chains of reasoning are needed to explain the relationship between education and the two different definitions of technocratic attitudes. While the support for the rule by experts can be explained by the respondents' anti-democratic values, the support for government by technique seems to demonstrate a direct relationship with the level of education. The relationship between education and anti-democratic values has been extensively studied in previous research. The relationship which requires our attention in this case is the one between education and government by technique. Is it really to be expected that people with lower levels of education show a stronger support for government by technique? We will examine this relationship further in our discussion.

Although this is an individual-data level study, it might be interesting to see whether or not our results are reflected at an aggregate level. Figure 5.1 shows the average scores on the technocratic mentality index in the OECD countries³. When regressing the Human Development Index on the technocratic index we obtain a coefficient of -0.893 significant at the 1% level⁴. In other words, factors such as income and education are negatively associated to the support for government by technique both at the individual and the aggregate level. Although the aggregate comparative study opens up new avenues of research interest, for example the effect of dictatorships on technocratic attitudes, these themes will not be studied here.

5.2 Explaining political behaviour

In this second part of our empirical section our (until now) dependent variables will be used as independent variables in order to predict political behaviour such as party preferences and voting abstention. We begin by looking at what we call the ideological party preferences of the respondents by using least square estimations.

Table 5.3 shows the association between the support for the rule of experts and the rile index. The rile index takes on values between -1 and 1 where -1 represents extreme left wing and 1 extreme right wing. Column (1) shows negative regression coefficients, however this effect disappears once we control for other explanatory variables. In other words, the 'net' effect of our first definition of technocratic attitudes, (the support for rule by experts) on

¹It is interesting to note that both age and gender also seem to affect technocratic attitudes. According to our model, women are more technocratic, so are young people.

²It is important to keep in mind that we cannot compare the coefficients across the various specifications in a precise manner since the number of observations varies in the different models.

³A close up map of Europe is available in the appendix C.

⁴See the appendix C for aggregate results.

Valores Tecnocráticos en el Mundo

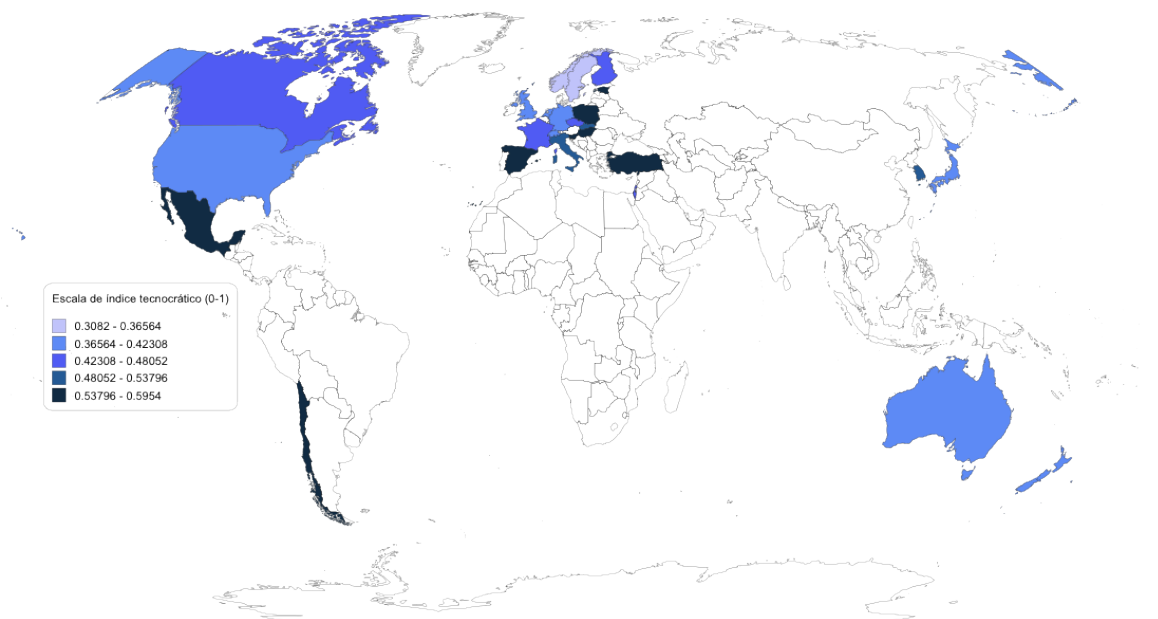


Figure 5.1: Technocratic attitudes in the OECD countries

ideological party preference appears to be irrelevant, in accordance with our hypothesis.

In table 5.4 which looks at our technocratic mentality index the effect on our dependent variable is also shown to be negative at first. However, when controlling for other variables the coefficient becomes positive and significant. That is, the effect of technocratic attitudes on party preferences is positive and significant when controlling for all other variables in the model. A positive relationship indicates that more technocratic mentality leads to a stronger right-wing preference. We decide to express the index in a scale of 0-10 to better interpret the results. Column (4) shows that when our technocratic index increases by one unit, the predicted value of the rule index approximately increases by 0.01. The values predicted by Index 2 are larger⁵. Here an unit's increase in technocratic attitudes (expressed in a scale from 0-10) is associated with an increase of almost 0.04 in the rule index. What do these results really tell us? To better illustrate the meaning of our results, we give a practical example. Sweden has an average score of 3.1 on the technocratic mentality index (when expressed as a scale from 0-10). Spain has an average of 5.7. The difference is 2.6. An increase of 2.6 points on the technocratic mentality scale (index 2) would imply an increase of 0.104 on the rule index. This approximately corresponds to passing from supporting the Spanish party: Izquierda Unida (left wing) to supporting the Spanish party: Partido Socialista Obrero Español (moderate left wing). If this is a big or a small effect is a subjective judgment.

In summary, as our hypotheses predicted, there is no significant relationship between ideological party preference and technocratic attitudes when referring to the support for the rule by experts, but there is a significant relationship between technocratic attitudes understood as the government by technique and ideological party preference. However,

⁵see results in Appendix table?

Table 5.3: Support for Rule by Experts and Ideological Party Preference (OLS)

| | <i>Dependent variable:</i> | | | |
|----------------------------------|------------------------------|----------------------|----------------------|----------------------|
| | Ideological Party Preference | | | |
| | (1) | (2) | (3) | (4) |
| [Ref. Rule by experts very good] | - | - | - | - |
| Rule by experts fairly good | -0.004 (0.013) | 0.008 (0.012) | 0.028* (0.015) | 0.022 (0.016) |
| Rule by experts fairly bad | -0.033** (0.013) | -0.008 (0.012) | 0.005 (0.016) | -0.0002 (0.016) |
| Rule by experts very bad | -0.025* (0.014) | -0.005 (0.013) | 0.005 (0.017) | 0.008 (0.018) |
| Age | | 0.001*** (0.0002) | 0.001*** (0.0003) | 0.001*** (0.0003) |
| Female | | -0.036*** | -0.035*** | -0.037*** |
| Country fixed effects | | Yes | Yes | Yes |
| [Ref. Education Lower] | | | - | - |
| Education Middle | | | -0.019 (0.013) | -0.020 (0.013) |
| Education Upper | | | -0.066*** (0.015) | -0.065*** (0.015) |
| [Ref. Income Lower] | | | - | - |
| Income Middle | | | 0.057*** (0.011) | 0.056*** (0.011) |
| Income Higher | | | 0.116*** (0.012) | 0.117*** (0.012) |
| Occupation | | | Yes | Yes |
| [Ref. Strong leader very good] | | | | - |
| Strong leader fairly good | | | | 0.035 (0.024) |
| Strong leader bad | | | | 0.033 (0.023) |
| Strong leader very bad | | | | 0.014 (0.023) |
| Observations | 10,319 | 10,286 | 6,257 | 6,174 |
| R ² | 0.001 | 0.214 | 0.238 | 0.240 |

Note:

*p<0.1; **p<0.05; ***p<0.01

the R-square statistic shows that our independent variable only accounts for a very small variation in the dependent variable. In fact it is so small we avoid drawing any definite conclusions from the result.

Table 5.4: Support for Government by Technique and Ideological Party Preference (OLS)

| | <i>Dependent variable:</i> | | | |
|--------------------------------|------------------------------|-----------------------|-----------------------|-----------------------|
| | Ideological Party Preference | | | |
| | (1) | (2) | (3) | (4) |
| Index 1 (0-10) | -0.0048*** (0.0014) | 0.0081*** (0.0014) | 0.0097*** (0.0019) | 0.0107*** (0.0020) |
| Age | | 0.001*** (0.0002) | 0.001*** (0.0003) | 0.001*** (0.0003) |
| Female | | -0.032*** (0.006) | -0.029*** (0.008) | -0.037*** (0.009) |
| Country fixed effects | | Yes | Yes | Yes |
| [Ref. Education Lower] | | | - | - |
| Education Middle | | | -0.021* (0.012) | -0.019 (0.013) |
| Education Upper | | | -0.059*** (0.014) | -0.059*** (0.015) |
| [Ref. Income Lower] | | | - | - |
| Income Middle | | | 0.060*** (0.011) | 0.061*** (0.011) |
| Income Higher | | | 0.118*** (0.011) | 0.119*** (0.012) |
| Occupation | | | Yes | Yes |
| [Ref. Strong leader very good] | | | | - |
| Strong leader fairly good | | | | 0.041* (0.023) |
| Strong leader bad | | | | 0.043* (0.022) |
| Strong leader very bad | | | | 0.026 (0.022) |
| Observations | 11,945 | 11,905 | 7,035 | 6,285 |
| R ² | 0.001 | 0.229 | 0.252 | 0.242 |

Note: *p<0.1; **p<0.05; ***p<0.01

Table 5.5 shows the relationship between technocratic attitudes understood as the support for the rule by experts and voting abstention. In this case we use maximum likelihood estimations. The coefficients show whether the likelihood that a group *abstains* from participating in elections is smaller or bigger as compared to the reference group. In this case we see what seems to be a non-linear relationship. In column (1) we see that the likeliness is lowest among individuals who consider that technocracy is ‘fairly bad’ (the odds of voting decreases by more than 40%), but surprisingly increases again among people who consider technocracy to be ‘very bad’. Column (2) adds demographic control variables and column (3) adds socioeconomic control variables. The relationship stays very much the same when

controlling for other factors. When adding our final control variable in column (4) however, the relationship loses significance in all but one category. This may indicate that, as hypothesized, the higher probabilities of abstention among supporters of the rule by experts is explained primarily by their low support for democracy in general.

Table 5.5: Support for the Rule by Experts and Abstention (Logistic regression)

| | <i>Dependent variable:</i> | | | |
|----------------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|
| | Abstention | | | |
| | (1) | (2) | (3) | (4) |
| [Ref. Rule by experts very good] | - | - | - | - |
| Rule by experts fairly good | -0.249*** (0.090) [0.780] | -0.270*** (0.095) [0.763] | -0.308** (0.124) [0.735] | -0.182 (0.133) [0.834] |
| Rule by experts fairly bad | -0.537*** (0.099) [0.584] | -0.470*** (0.106) [0.625] | -0.616*** (0.145) [0.540] | -0.482*** (0.157) [0.618] |
| Rule by experts very bad | -0.338*** (0.110) [0.713] | -0.312*** (0.119) [0.732] | -0.402** (0.172) [0.669] | -0.254 (0.187) [0.776] |
| Female | | 0.092 (0.065) [1.097] | 0.039 (0.099) [1.040] | 0.042 (0.101) [1.043] |
| Age | | -0.009*** (0.002) [0.991] | -0.012*** (0.003) [0.988] | -0.014*** (0.003) [0.986] |
| Wave fixed effects | | Yes | Yes | Yes |
| Country fixed effects | | Yes | Yes | Yes |
| [Ref. Education lower] | | | - | - |
| Education Middle | | | 0.121 (0.115) [1.129] | 0.165 (0.117) [1.180] |
| Education Upper | | | 0.194 (0.157) [1.214] | 0.250 (0.159) [1.284] |
| [Ref. Income lower] | | | - | - |
| Income Middle | | | -0.141 (0.108) [0.868] | -0.135 (0.110) [0.874] |
| Income Higher | | | -0.317** (0.154) [0.728] | -0.351** (0.156) [0.704] |
| Occupation | | | Yes | Yes |
| [Ref. Strong leader fairly good] | | | | - |
| Strong leader fairly good | | | | -0.455*** (0.166) [0.634] |
| Strong leader bad | | | | -0.407** (0.169) [0.666] |
| Strong leader very bad | | | | -0.430** (0.173) [0.651] |
| Observations | 58,394 | 58,244 | 39,937 | 38,962 |
| Log Likelihood | -5,296.275 | -3,908.784 | -2,010.329 | -1,951.262 |
| Akaike Inf. Crit. | 10,600.550 | 7,881.568 | 4,116.659 | 4,004.525 |

Note:

*p<0.1; **p<0.05; ***p<0.01

When studying the effect of government by technique on abstention in table 5.6 we see that individuals with a higher score on the technocratic mentality index are more likely to abstain from participating in elections. In column (1) we see that when the technocratic index, expressed in a scale from 0-10 increases by one unit, the odds of abstaining increase by almost 20%. This result differs from our prediction made in the previous chapter. Adding additional controls does not affect the relationship in any appreciable manner. When adding our final control variable in column (4) we see that the support for government by technique holds a direct relationship with political abstention independently of anti-democratic values. That is, the higher probabilities of abstention among individuals who support government by technique cannot only be explained by the disrespect for democracy. We will analyse this more carefully in our discussion. Finally, a surprising result is that education is seen to positively affect abstention. There is a big consensus in the academic community that education holds a negative relationship to abstention; more educated people abstain less. When running a binary regression between education and abstention we indeed see a negative relationship between the two variables. However, adding control variables such as gender, occupation or country fixed effects to the model affects the coefficient, reducing the effect or making the coefficient change signs. We will look more carefully at this unexpected relationship in our discussion.

Table 5.6: Support for Government by Technique and Abstention (Logistic regression)

| | <i>Dependent variable:</i> | | | |
|--------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|
| | Abstention | | | |
| | (1) | (2) | (3) | (4) |
| Index 1 (0-10) | 0.1834*** (0.0098) [1.201] | 0.1354*** (0.0117) [1.145] | 0.1180*** (0.0179) [1.125] | 0.1525*** (0.0207) [1.165] |
| Female | | -0.012 (0.054) [0.988] | -0.0003 (0.089) [0.999] | -0.020 (0.100) [0.980] |
| Age | | -0.012*** (0.002) | -0.011*** (0.003) | -0.014*** (0.003) |
| Wave fixed effects | | Yes | Yes | Yes |
| Country fixed effects | | Yes | Yes | Yes |
| [Ref. Education lower] | | | - | - |
| Education Middle | | | 0.328*** (0.103) [1.388] | 0.301*** (0.117) [1.351] |
| Education Upper | | | 0.497*** (0.142) [1.644] | 0.475*** (0.159) [1.608] |
| [Ref. Income lower] | | | - | - |
| Income Middle | | | -0.083 (0.093) [0.920] | -0.112 (0.108) [0.894] |
| Income Higher | | | -0.430*** (0.145) [0.651] | -0.346** (0.156) [0.708] |
| Occupation | | | Yes | Yes |
| [Ref. Strong leader very good] | | | | - |
| Strong leader fairly good | | | | -0.521*** (0.159) [0.594] |
| Strong leader bad | | | | -0.454*** (0.156) [0.635] |
| Strong leader very bad | | | | -0.401** (0.161) [0.670] |
| Observations | 87,266 | 80,572 | 47,682 | 40,293 |
| Log Likelihood | -7,692.793 | -5,732.081 | -2,614.934 | -1,989.996 |
| Akaike Inf. Crit. | 15,389.590 | 11,530.160 | 5,327.868 | 4,077.992 |

Note:

*p<0.1; **p<0.05; ***p<0.01

Chapter 6

Discussion

A few fundamental questions arise out of the empirical results presented in chapter 5. Although our hypotheses regarding the support for the rule by experts were confirmed by the data, more questions arise when studying the support for government by technique. When looking at the relationship between education and technocratic attitudes we asked ourselves, is it credible that the least educated are the strongest supporters for government by technique? In our first section of this chapter we will further discuss the possible mechanisms through which knowledge and technocratic attitudes understood as the support for government by technique might be channelled. When looking at how technocratic attitudes affect political behaviour we wondered what might be the link between technocratic attitudes and abstention? Consequently, we will study the relationship between technocracy and political participation in the second section of our discussion.

6.1 Technocracy, power and social control

If you don't want a man unhappy politically, don't give him two sides to a question to worry him; give him one. Better yet, give him none.

— Beatty, *Fahrenheit 451*

Technocracy understood as the government by technique systematically excludes people lacking expertise from the political process. According to Laird, technocracy means the ‘disenfranchisement of citizens’. He argues that when debate is structured in technical terms “citizens who are not technical specialists simply have nothing to contribute, even if they have a strong interest in the issue. The debate will be dominated by institutions that can afford such expertise” (Laird, 1990:53). Ribbhagen (2013:16) identifies a similar pattern commenting that “a policy issue or process that is technocratically framed is likely to disempower those lacking information and expertise within the area while supplying those with information and expertise with a ‘technocratic key’ leading to the door of political power”. Williams (2006) distinguishes between a *governance dimension* and a *programmatic dimension* of technocracy. From the point of view of a governance dimension, it is probable that the ones who lose the greatest amount of political power and influence are the least edu-

cated individuals in society. The gate of access to effective political participation remains closed to those lacking expert knowledge themselves, and lacking means to obtain expert knowledge from intermediaries. The programmatic dimension “consists of the neoliberal market reforms that technocratic practitioners institute” (Williams, 2006:120). Policies that favour capital over labour harm the most vulnerable in society, such as the least educated. A blogger from *the economist* writes: “technocrats may be good at saying how much pain a country must endure, how to make its debt level sustainable or how to solve a financial crisis. But they are not so good at working out how pain is to be distributed”¹. We can identify two processes through which less educated citizens lose power inside a technocratic paradigm: (1) Since they are not experts themselves, and since they most probably don’t have the means to access expert knowledge, they cannot question the facts that are presented to them. For example, if a famous politician claims that it is scientifically proven that reducing deficit and cutting social spending are the only ways to regain economic growth, a person with no knowledge on the subject cannot contest this, because he does not have the knowledge to argue otherwise. (2) If debate is framed in a technocratic manner, value judgments which might otherwise be considered important are trivialized since they belong to a ‘inferior’ group of knowledge. For example, if government explains that a nuclear power plant is the most efficient way of generating energy and therefore the optimal policy option, it can be difficult for the local population to express resistance, since their opinions and value judgments are deemed less important. By discarding normative arguments of social justice, the technocratic paradigm appears to work against the very same people who have been identified as its strongest supporters. How can this be? Why would the least educated support technocratic decision-making if they are the ones who benefit from it the least?

According to Fischer: “numerous authors have identified a subtle, apolitical form of authoritarianism in this technocratic strategy. When expert solutions are legitimized as rational, efficient, and enlightened, it is not so easy for the unwilling recipients to resist their applications” (Fischer, 2000:18). The fact that some knowledge is classified as ‘superior’ makes it extremely difficult for laypeople to argue or question arguments presented to them in technocratic terms. People with less education are very possibly more inclined to accept what the possessors of knowledge claim to be true, since they lack any kind of tools to attack these claims. Fischer talks of ‘counter-expertise’. When one scientifically proven assumption is proved wrong by other scientifically proven assumptions, the unreliability of scientific knowledge reveals itself and it becomes easier to bring back the discussion to the political sphere. People with little education however are incapable of producing counter-expertise and cannot battle with allegedly ‘objective truths’.

Perhaps we must analyse technocracy as an *exercise of power* in order to shed light on the complex relationship between knowledge and technocratic support. The writing of Foucault (1980) greatly contribute to this discussion by describing the intimate relationship between power and knowledge. According to Foucault this relationship is not unidirectional. Although knowledge creates and sustains relationships of power, power also produces knowl-

¹<http://www.economist.com/blogs/newsbook/2011/11/technocrats-and-democracy>

edge. That is, power produces effects of truth by determining what counts as knowledge. Flyvbjerg (1998) summarizes the relationship as follows:

Power concerns itself with defining reality rather than with discovering what reality “really” is [...] this is not to imply that power seeks out rationality and knowledge because rationality and knowledge are power. Rather, power defines what counts as rationality and knowledge and thereby what counts as reality (Flyvbjerg, 1998:319).

When referring to technocracy, expert knowledge does not only permit certain elites to occupy powerful positions, this same system of elites and institutions create knowledge, by defining what can be considered as such. By shaping opinion on what *kind of knowledge* is accepted, technocratic discourse shapes our perception on what methods and what criteria for decision-making are deemed relevant and important. Power is not power for having discovered objective truth. Power shapes the way we understand truth.

Foucault’s view of power fits into our conception of government by technique. We are not referring to a powerful rule of elites which openly dominates and represses. In fact, the exercise of power should not be attributed to one specific set of actors. Rather power is capillary: it is structural, relational and can be found in the very discourse which gently moulds our perceptions of what reality is, and what knowledge should be. Lukes (2005) explains that when power is not coercive, it needs compliance from willing subjects. What we see in our data is a strict compliance from those who benefit the least from current power relations. The technocratic paradigm thus produces ‘subjects’ among the least educated in society by convincing them that the determined knowledge is objective and neutral. There is a certain component of ‘instrumentality’ in Foucault’s view of power. The compliance of subjects not only represses, but produces. In our case, the compliance of those who least benefit from technocratic policy-making assures the functionality of the capitalist system increasing the productive potential of society. Herbert Marcuse (1964) describes a one-dimensional society where “domination is transfigured into administration” (Marcuse, 1964:32) and where people become alienated and blind to apparent conflicts of interests since their *false*, material needs are fulfilled by the increased consumption of luxury products to the benefit of the capitalist system. The domination of technocratic reasoning thus functions as a manner of social control, aimed at easing economic productivity. Excluding alternative modes of reasoning from the regime of truth limits critical thinking and political debate. As Bradbury so meritoriously describes in his book *Fahrenheit 451*, a man who is only shown one side of the story will be less likely to detect potential conflicts of interest and therefore be more willing to comply.

Viewing technocracy as an exercise of power helps us understand how the system assures the compliance of those who are being dominated in the existing power relationships. One might still ask why this conflict of interest is not more often commented upon. Lukes describes this kind of situation as a *latent conflict*. A latent conflict implies a “contradiction between the interests of those exercising power and the real interests of those they exclude” (Lukes, 2005:28). Although there is a potential conflict of *real* interests between the ‘technostructure’ and the normal citizen, this conflict is not generally observed since there is no

conflict of *subjective* interests. For example, technocratic discourse talks about the common good, when what is good for some is not necessarily good for everyone. For example, everybody talks about the imperativeness of economic growth, but few discuss whether growth will really benefit everyone: “specifically, planners and managers blur the distinction between the worlds of economic production and social interaction, thus making it difficult for many to distinguish between the priorities of the economic system and those of their own lives” (Fischer, 1990:47). Subsequently, technocracy should not be understood as a 1-dimensional exercise of power where domination is apparent and conflict overt, where the dominated *upon* are obliged to do what the *dominator* wants. Technocracy should be understood as an exercise of 3-dimensional power. Structures create (not necessarily consciously) a context where the technocratic mode of reasoning is considered more ‘valid’ than alternative modes of reasoning. Centeno resumes:

We could speak of ideological battle as a struggle over answers (1-dimensional) or at most over questions (2-dimensional). Technocracies focus on the much more important struggle over the methods to determine the validity of answers and questions (3-dimensional). This third dimension encompasses a faith in the applicability and superiority of professional and technical methodologies and paradigms (Centeno, 1993:313).

In summary, a possible theory which would explain what we see in the data is that less educated people possess less tools in order to question the facts that powerful institutions present as true. The incapacity of producing counter-expertise and to bring back the technocratic discussion to a political level makes them more inclined to accept their affirmations. Since the resulting conflict of interests is latent, there is little resistance to existing power relations.

6.2 Technocratic attitudes and vote incentives

When studying the effect of technocratic attitudes understood as the support for government by technique on abstention, our results show a direct relationship between these two variables independently of anti-democratic values. That is, the low turnout among this group is not necessarily explained by the disregard for the democratic ideal. Why then choose not to participate in democratic governance? Support for the democratic system is clearly not the only variable explaining electoral participation and on further examination, our hypothesis regarding the voting behaviour of individuals with technocratic attitudes (H_7) was rather unidimensional. Many factors might explain the higher probabilities of abstaining from voting among people with these particular attitudes. For example, a person with technocratic values probably wants to live inside a democratic system, but does not get much satisfaction from participating himself.

In the previous section we took on a theoretical approach when trying to explain why less educated people support technocratic decision-making. We discussed that the support for the technocratic policy-paradigm could be viewed as a form of compliance of willing subjects to determined power relations. Keeping to one’s own business and letting others

decide could also be a sign of such compliance. After all, politically active members of the public are seen as worrisome threats to the agendas of some political and corporate elites (Fischer, 1990:28). From this point of view one could argue that the ‘system’ which benefits from technocratic decision-making also manipulates the way we think about democracy, overemphasising the assurance of *negative liberties*, ignoring the democratic requirement of *positive liberties* such as self-governance through participation. In this section however we will put aside the theoretical discussion on power relationships and explore whether or not voting abstention could be considered *rational behaviour*. Many researchers have studied the idea that abstention might be a rational choice for individuals who take into account the costs and benefits of voting.

When presenting our results in the previous chapter, we noticed that education had a positive effect on voting abstention. We considered this enigmatic since education is often claimed to hold a negative relationship with voting abstention (Wolfinger and Rosenstone, 1980). This ‘strange’ relationship makes us wonder whether the effect of education on abstention might in fact be different for people with and without technocratic attitudes. In view of this, in this final section of our discussion, we wish to analyse (1) why people with technocratic attitudes abstain and (2) whether the effect of education on abstention is different for people with and without technocratic attitudes.

Education is often related to the amount of information an individual has when it comes to voting. It is probable that an educated person follows political news to a larger extent and processes political messages more effectively. An existing theory describing the link between abstention and ‘asymmetrical information’ is the one presented by Feddersen and Pesendorfer (1996) in their article ‘The Swing Voter’s Curse’. These authors claim that there are two kinds of voters: partisans and independents. Independent voters have higher probabilities to affect the outcome of elections seeing that the support from swing voters often ends up to be crucial for a party’s electoral victory. Feddersen and Pesendorfer (1996) argue that independent voters who have little information about the quality of policy proposals tend to abstain from participating in elections out of rational calculation. Since independent voters are more likely to determine the outcome of elections than partisan voters, the *strategic* thing to do for an independent voter who has little information would be to *abstain* from participating in elections seeing that: “abstention is an optimal strategy because it maximizes the probability that the informed voters decide the elections” (Feddersen and Pesendorfer, 1996). Abstention in these circumstances has to be understood as a kind of ‘passive vote’. The abstainer cares about the outcomes of elections but chooses to delegate his vote to those who are better informed, thus increasing their chances of determining the election outcomes.

According to this chain of thought, the least informed independent voters *delegate* their vote via abstention to voters who are more informed as to which is the best option in view of the circumstances and the political proposals in question. ‘Partisan’ voters, however, vote out of habit and ideological commitment, more independently of education. This idea of rationally delegating decision-making to the better informed is very much in tune with a technocratic mode of reasoning. Those who know should decide, even inside a demo-

cratic framework. One might therefore consider that the distinction between ‘partisan’ and ‘independent’ voters could be translated into the distinction between ‘technocratic’ and ‘non-technocratic’ voters. If we assume that most technocratic voters are independent voters, the theory of Feddersen and Pesendorfer (1996) would predict that, *not only should people with technocratic attitudes abstain more, but the effect of education on abstention should be larger for people with technocratic attitudes*, seeing that independent voters with less information vote even less than partisan voters with little information.

Nevertheless, some factors make us believe that the distinction between ‘partisan’ and ‘independent’ voters isn’t the right distinction to make in this case. An independent voter could very well support pluralistic modes of decision making, and a person with technocratic attitudes may vote quite automatically for a specific party. As we saw in our previous chapter, people with technocratic attitudes tend to favour right-wing parties. Instead, we choose to distinguish between (1) technocratic voters and (2) pluralistic voters. We argue that a technocratic voter would be a person who only cares about the *outcomes* of elections. He cares about what policies are at stake and is concerned that the most efficient ones should be implemented. He does not care about participating for the sake of participating. If his vote is not pivotal, participating is meaningless. A pluralistic voter on the other hand is the absolute opposite of a technocratic voter. It is a person who greatly values the opportunity of participating and considers that voting is crucial for the quality of democracy. The outcome of the elections is secondary to the act of participating.

In view of this we present an alternative theory as to why people with technocratic attitudes abstain and how education affects abstention differently for technocratic and pluralistic voters. While Feddersen and Pesendorfer (1996) assumed that there are no costs involved when making the decision to vote, we will assume that costs such as weather, motivation and opportunity costs all influence the decision to vote. In view of these costs, Downs (1957) presented his famous theory in the book *An Economic Theory of Democracy* arguing that it is fundamentally *irrational* to vote. Since the costs of voting will always be higher than the possibility to actually affect the outcomes of the elections, rational individuals should be expected to abstain from voting. Riker and Ordeshook (1968) solved the ‘paradox of not voting’ by explaining that it is rational for people to vote because there are more benefits associated to participating than that of influencing election outcomes. Personal satisfaction of fulfilling a civic duty for example adds a consumption benefit to the act of voting.

We argue that for people with technocratic attitudes, the additional instrumental benefit from voting is in-existent. Rather, an individual with a technocratic mentality considers that participating without the chance of influencing the outcome (which is what they care about) is meaningless. The act of participating for its own sake doesn’t give them any additional satisfaction. The *utility* to vote for a person with technocratic attitudes is therefore always very low. For example, say U is the expected utility of voting for a person with technocratic attitudes. B is the benefit associated to voting if the desired outcome occurs and P is the probability that the individual’s vote will affect the outcome. C represents the costs involved in voting.

$$U_{TA} = (B * P) - C \quad (6.1)$$

Since P will always be 0 or close to 0, it is irrational for the technocratic individual to vote. That is, the abstention of individuals with technocratic attitudes can be explained by the fact that they only consider it rational to participate if they in fact have a chance to influence the outcomes. On the other hand, for a person with *pluralistic attitudes* (PA), participation is what gives democracy meaning. When voting, their *main* purpose for doing so is their satisfaction of participating in the joint plural decision-making process and fulfilling their civic duty as democratic citizens: “they seem to value being an active chooser independently of the outcomes of the collective choice” (Przeworski, 2010:14). We therefore add a parameter D in our formula indicating the emotional, instrumental benefits associated to participating.

$$U_{PA} = (B * P) - C + D \quad (6.2)$$

In view of these benefits, it should be much more probable that a pluralistic voter participates, than a technocratic voter, since the pluralistic voter associates more benefits to the act of voting. Furthermore, it is highly probable that, for a pluralistic voter, the instrumental benefit associated with voting grows the more education the individual has obtained. Many authors have commented that civic virtues and the preoccupation for the public good are positively affected by education (Almond and Verba, 1963). We therefore interact the instrumental benefit D with *education* thus obtaining a greater effect of D when *education* is higher.

$$U_{PA} = (B * P) - C + D + (D * education) \quad (6.3)$$

If these assumptions are correct, we would expect that not only do people with technocratic attitudes abstain more, but the effect of education on abstention should have a smaller effect on this group. Perhaps the relationship is more easily expressed in terms of pluralistic attitudes. *People with pluralistic attitudes are expected to abstain less and the effect of education on abstention should have a stronger (negative) effect for this group.* In order to check whether pluralistic voters abstain less and whether education has a stronger effect on abstention for people with pluralistic attitudes we run an interactive regression which shows the conditional effect of pluralistic attitudes on the relationship between education and abstention. In order to get a scale of pluralistic attitudes, we simply reverse the technocratic index².

The results in table 6.1 support our hypothesis and at the same time show that the theory of Feddersen and Pesendorfer (1996) isn't applicable in our case. In column (3) we see that although technocratic voters abstain to a larger extent than pluralistic voters, the effect of education is smaller for people with technocratic attitudes since they are more likely to abstain independently of education. For a person with pluralistic values, the effect of

²We choose to present the results in terms of pluralistic attitudes simply because the results are more easy to interpret. The regression using the traditional technocratic index can be found in the appendix C. The index is expressed in a scale of 0-1.

Table 6.1: Pluralistic Attitudes, Education and Abstention (Interactive Logistic Regression)

| | <i>Dependent variable:</i> | | | |
|-------------------------------------|----------------------------|----------------------|----------------------|----------------------|
| | Abstention | | | |
| | (1) | (2) | (3) | (4) |
| Pluralistic index | -1.834*** (0.098) | | -1.292*** (0.158) | -0.723** (0.306) |
| Education Middle | | -0.530*** (0.061) | -0.055 (0.128) | 0.881*** (0.225) |
| Education Upper | | -0.853*** (0.082) | 0.345* (0.182) | 1.144*** (0.312) |
| Controls | | | No | Yes |
| Pluralistic index* Education Middle | | | -0.652*** (0.248) | -1.352*** (0.437) |
| Pluralistic index* Education Upper | | | -1.714*** (0.335) | -1.452*** (0.547) |
| Observations | 87,266 | 69,607 | 69,604 | 40,293 |
| Log Likelihood | -7,692.793 | -6,449.783 | -6,312.976 | -1,983.247 |
| Akaike Inf. Crit. | 15,389.590 | 12,905.570 | 12,637.950 | 4,068.494 |

Note:

*p<0.1; **p<0.05; ***p<0.01

education increases with the associated benefits of voting. Figure 6.1 shows the marginal effects of pluralistic attitudes and education on abstention. The graph clearly illustrates that, as predicted, the probability of abstention decreases most steeply for people with pluralistic attitudes and upper levels of education. When adding our control variables³ in column (4) the effect of education remains strong and negative for people with pluralistic attitudes. However, the effect of education on people with technocratic attitudes is also shown to be significant and strong, but positive. Why would higher levels of education lead to higher levels of abstention for people with technocratic attitudes? A possible explanation could be that people with technocratic attitudes and higher levels of education are more rational, and therefore more easily observe the irrationality of their participation.

³The controls include income, occupation, age, gender, country and wave fixed effects and anti-democratic values.

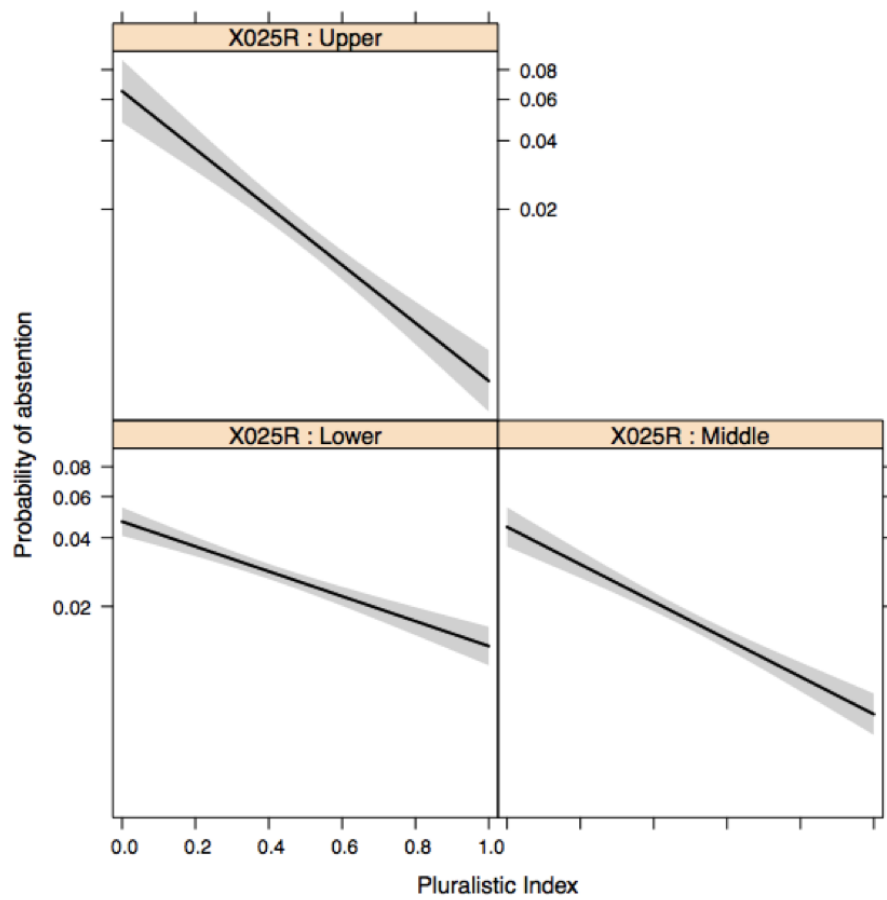


Figure 6.1: Pluralistic attitudes, education and abstention

Chapter 7

Conclusion

The aim of this paper has been to study technocratic attitudes. More specifically, our objectives were to examine the relationship between (1) education and technocratic attitudes, (2) technocratic attitudes and political behaviour and finally (3) to comment on the empirical difference between our two definitions of technocratic attitudes. Our findings can be summed up as follows:

1. Lower levels of education are associated to stronger support for the rule by experts. This relationship is in turn explained by the strong link between technocratic attitudes and anti-democratic values.
2. Lower levels of education directly lead to stronger support for government by technique. We argue that the incapacity to question what is presented as ‘true’ and the inability to produce counter-expertise explains this relationship.
3. The support for the rule by experts is not associated to any specific ideological party preference.
4. The support for government by technique is associated to the preference for right-wing parties. The fact that right-wing parties use technocratic discourse as a form of legitimization and substantiation explains this relationship.
5. The support for the rule by experts leads to higher probabilities of voting abstention. The relationship is explained by low support for democracy among this group.
6. The support for government by technique leads to higher probabilities of voting abstention independently of anti-democratic values. We argue that this might be so since technocratic voters mostly care about the outcomes of elections and thus have small incentives to vote.

We believe that this study has shed some light on who the supporters of technocratic decision-making are, and how they behave politically. As we have argued earlier, technocracy should not only be studied by looking at decision-making processes or institutional arrangements, but by examining *technocracy at an individual level*. What characterizes technocratic

governance is not merely its institutions, but the values and attitudes of the people who support them. Contrarily to what conventional wisdom claims, *technocratic mentality is more common among people with low levels of education*. This does not, however, mean that they are the ones who benefit from this decision-making paradigm.

The wish to study so many relationships in one paper has perhaps weakened the quality of the theoretical arguments justifying and explaining causal mechanisms. We have however made a serious effort (mainly in our discussion) to give *answers* and not only *descriptions*. Future studies may wish to approach the subject above all with more sophisticated tools for confronting the endogeneity problems from which this study suffers. Nevertheless, our aim was never to establish positive uni-causal relationships. In a way, it seems correct that this paper should serve more as a source of inspiration for future studies, than as a means to prove the validity of determined hypotheses; we have, after all dedicated numerous pages of this paper to discussing the limits of science.

In this paper we have studied technocratic attitudes understood as the support for the rule by experts and government by technique in a *static* sense. From this point of view there is a clear theoretical and empirical distinction between the two definitions. However, future research may wish to approach technocracy in a more *dynamic* sense. The use of technical methods in politics may, in time lead to structural rearrangements where political parties end up dominated by experts. The continued study of the transformation and characteristics of political elites would be of great interest in order to study up to what point the two definitions of technocracy might be converging over time. It is important to keep in mind that a convergence of the two concepts in modern day societies inevitably would imply the introduction of undemocratic political structures in what we believe to be democratic societies.

This paper has studied the contrasts between scientific and political approaches to policy-making. During the course of the paper we have taken on a scientific approach, attempting to be neutral when examining our empirical data and using statistical tools in order to detect tendencies and make generalizations. Since science has been given such protagonism in our methodological approximation, it would seem almost ‘unfair’ not to give our political mode of reasoning a chance to make some value judgments. In this paper we have commented many times that *government by technique* is compatible with representative democracy. However, our expressed *opinion* is that contemporary technocracy may be extremely harmful to the quality of democracy. Government by technique fundamentally means the neglect of normative reasoning in politics. The *substance* of politics is ignored and overridden by a *one-dimensional* discourse where “governance becomes less a matter of determining the appropriate direction for society than one of adjusting its institutions and policies to the flows of economic and technological development” (Fischer, 1990:16). By ignoring that there exist different, sometimes incompatible world-views, technocratic practitioners impose their world-view on the rest of society, using a scientific and complex language to shield them from opposition from below. Technocratic reasoning thus *depoliticizes politics*, by demeriting normative arguments and *politicizes expertise* by using scientific discourse to advance

specific interests. By focusing on the best *means* for policy “the essential political question - production of what? - is at best relegated to secondary status” (Fischer, 1990:24). Casting political issues in technical terms ultimately leads to the reduced power and ability of citizens to exercise self-governance. All in all, in a technocratic decision-making paradigm, citizens have less to say and less alternatives to consider: “in a nutshell, the crisis of normative neglect is truly a fundamental crises of democracy” (Fischer, 1990:49).

In view of this, we believe that perhaps *the real ‘threat’ to democracy comes from within democracy*. Subtle tendencies are leading societies toward a place where elections are not about choosing, but about formally legitimizing, and where politicians reject responsibility for policy outcomes since their decisions were based on (unaccountable) expert recommendations. As a result, and in tune with other researchers such as Fischer (1990), Laird (1990) and Ribbhagen (2013), we suggest that the focus of future research on technocracy should concentrate on these new political dynamics. This paper contributes by explaining that the people who presumably support representative democracy decide to abstain from participating in fundamental democratic procedures such as elections thus exacerbating the crisis of democracy from within.

How could these negative effects of technocratic decision-making be countered? Perhaps, the negative effects of technocratic reasoning must be tackled not by reducing the role of expert knowledge in society, but by diffusing and democratizing knowledge. Expertise is fundamental for good decision-making. Few would wish to abandon all economic evaluation of programs or wish to make every decision solely on the basis of intuition or belief. How then can we *use expertise in a more democratic way?* Fischer writes: “the policy sciences have sought to develop methods and practices designed to settle rather than stimulate debate” (Fischer, 1998). Perhaps this is the greatest problem concerning technocratic decision-making today. Knowledge is used to escape debate about value-laden issues. Wouldn’t it be better if expertise could be channelled in a way in which it could *stimulate debate?* Dewey spoke of changing the relationship between expert and citizen, having the experts interpret complex issues in ways which facilitate citizen learning and empowerment (Dewey, 1927). The key to more democratic, post-industrial societies perhaps lies in the development of mechanisms to transform expertise into a tool for *citizens*, and not for powerful corporations. Knowledge, used in the right way could thus improve public debate and democratize expertise. Whether this is possible is not a question of science, but purely a matter of political will.

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Appendix A

Regression results

Table A.1: Education and Support for Government by Technique (OLS)

| | <i>Dependent variable:</i> | | | |
|--------------------------------|----------------------------|----------------------|-------------------------|-------------------------|
| | Index 2 | | | |
| | (1) | (2) | (3) | (4) |
| [Ref. Education Lower] | - | - | - | - |
| Education Middle | -0.060*** (0.001) | -0.040*** (0.001) | -0.032*** (0.001) | -0.029*** (0.002) |
| Education Upper | -0.101*** (0.001) | -0.072*** (0.002) | -0.058*** (0.002) | -0.053*** (0.002) |
| [Ref. Income Lower] | | - | - | - |
| Income Middle | | -0.007*** (0.001) | -0.007*** (0.001) | -0.007*** (0.001) |
| Income Higher | | -0.026*** (0.002) | -0.010*** (0.002) | -0.009*** (0.002) |
| Occupation | | Yes | Yes | Yes |
| Female | | | 0.010*** (0.001) | 0.007*** (0.001) |
| Age | | | -0.0001*** (0.00004) | -0.0002*** (0.00004) |
| Wave fixed effects | | | Yes | Yes |
| Country fixed effects | | | Yes | Yes |
| [Ref. Strong leader very good] | | | | - |
| Strong leader fairly good | | | | 0.0002 (0.002) |
| Strong leader bad | | | | -0.014*** (0.002) |
| Strong leader very bad | | | | -0.034*** (0.002) |
| Observations | 69,604 | 47,759 | 47,682 | 40,293 |
| R ² | 0.087 | 0.131 | 0.242 | 0.243 |

Note:

*p<0.1; **p<0.05; ***p<0.01

Table A.2: Education and Support for Government by Technique (OLS)

| | <i>Dependent variable:</i> | | | |
|--------------------------------|----------------------------|----------------------|-----------------------|----------------------|
| | Index 3 | | | |
| | (1) | (2) | (3) | (4) |
| [Ref. Education Lower] | - | - | - | - |
| Education Middle | -0.118*** (0.002) | -0.083*** (0.002) | -0.058*** (0.002) | -0.051*** (0.003) |
| Education Upper | -0.178*** (0.002) | -0.125*** (0.003) | -0.087*** (0.003) | -0.077*** (0.003) |
| [Ref. Income Lower] | | - | - | - |
| Income Middle | | -0.024*** (0.002) | -0.022*** (0.002) | -0.020*** (0.002) |
| Income Higher | | -0.058*** (0.003) | -0.029*** (0.003) | -0.025*** (0.003) |
| Occupation | | Yes | Yes | Yes |
| Female | | | 0.004** (0.002) | -0.002 (0.002) |
| Age | | | 0.0003*** (0.0001) | 0.0001** (0.0001) |
| Wave fixed effects | | | Yes | Yes |
| Country fixed effects | | | Yes | Yes |
| [Ref. Strong leader very good] | | | | - |
| Strong leader fairly good | | | | -0.029*** (0.004) |
| Strong leader bad | | | | -0.054*** (0.004) |
| Strong leader very bad | | | | -0.062*** (0.004) |
| Observations | 69,604 | 47,759 | 47,682 | 40,293 |
| R ² | 0.091 | 0.142 | 0.263 | 0.257 |

Note:

*p<0.1; **p<0.05; ***p<0.01

Table A.3: Support for Government by Technique and Ideological Party Preference (OLS)

| | <i>Dependent variable:</i> | | | |
|---------------------------|------------------------------|-----------------------|-----------------------|-----------------------|
| | Ideological Party Preference | | | |
| | (1) | (2) | (3) | (4) |
| Index 2 (0-10) | -0.0011 (0.0028) | 0.0301*** (0.0027) | 0.0355*** (0.0037) | 0.0397*** (0.0040) |
| Female | | -0.033*** (0.006) | -0.030*** (0.008) | -0.038*** (0.009) |
| Age | | 0.001*** (0.0002) | 0.001*** (0.0003) | 0.001*** (0.0003) |
| Country fixed effects | | Yes | Yes | Yes |
| [Ref. Education Lower] | | | - | - |
| Education Middle | | | -0.016 (0.012) | -0.014 (0.013) |
| Education Upper | | | -0.049*** (0.014) | -0.050*** (0.015) |
| [Ref. Income Lower] | | | - | - |
| Income Middle | | | 0.060*** (0.010) | 0.060*** (0.011) |
| Income Higher | | | 0.117*** (0.011) | 0.117*** (0.012) |
| Occupation | | | Yes | Yes |
| [Strong leader very good] | | | | - |
| Strong leader fairly good | | | | 0.038 (0.023) |
| Strong leader bad | | | | 0.044** (0.022) |
| Strong leader very bad | | | | 0.033 (0.022) |
| Observations | 11,945 | 11,905 | 7,035 | 6,285 |
| R ² | 0.00001 | 0.235 | 0.259 | 0.250 |

Note:

*p<0.1; **p<0.05; ***p<0.01

Table A.4: Support for Government by Technique and Ideological Party Preference (OLS)

| | <i>Dependent variable:</i> | | | |
|--------------------------------|------------------------------|-----------------------|----------------------|----------------------|
| | Ideological Party Preference | | | |
| | (1) | (2) | (3) | (4) |
| Index 3 (0-10) | -0.0099*** (0.0017) | 0.0047*** (0.0017) | 0.0055** (0.0023) | 0.0061** (0.0026) |
| Female | | -0.031*** (0.006) | -0.028*** (0.008) | -0.035*** (0.009) |
| Age | | 0.001*** (0.0002) | 0.001*** (0.0003) | 0.001*** (0.0003) |
| Country fixed effects | | Yes | Yes | Yes |
| [Ref. Education Lower] | | | - | - |
| Education Middle | | | -0.023** (0.012) | -0.022* (0.013) |
| Education Upper | | | -0.064*** (0.014) | -0.063*** (0.015) |
| [Ref. Income Lower] | | | - | - |
| Income Middle | | | 0.059*** (0.011) | 0.059*** (0.011) |
| Income Higher | | | 0.117*** (0.011) | 0.118*** (0.012) |
| Occupation | | | Yes | Yes |
| [Ref. Strong leader very good] | | | | - |
| Strong leader fairly good | | | | 0.044* (0.023) |
| Strong leader bad | | | | 0.042* (0.022) |
| Strong leader very bad | | | | 0.022 (0.022) |
| Observations | 11,945 | 11,905 | 7,035 | 6,285 |
| R ² | 0.003 | 0.227 | 0.250 | 0.239 |

Note:

*p<0.1; **p<0.05; ***p<0.01

Table A.5: Support for Government by Technique and Abstention (Logistic Regression)

| | <i>Dependent variable:</i> | | | |
|--------------------------------|----------------------------|-----------------------|-----------------------|-----------------------|
| | Abstention | | | |
| | (1) | (2) | (3) | (4) |
| Index 2 (0-10) | 0.4010*** (0.0195) | 0.2871*** (0.0224) | 0.2478*** (0.0347) | 0.2978*** (0.0405) |
| Female | | -0.029 (0.054) | -0.007 (0.089) | -0.021 (0.100) |
| Age | | -0.012*** (0.002) | -0.011*** (0.003) | -0.015*** (0.003) |
| Wave fixed effects | | Yes | Yes | Yes |
| Country fixed effects | | Yes | Yes | Yes |
| [Ref. Education Lower] | | | - | - |
| Education Middle | | | 0.345*** (0.104) | 0.308*** (0.117) |
| Education Upper | | | 0.517*** (0.143) | 0.479*** (0.159) |
| [Ref. Income Lower] | | | - | - |
| Income Middle | | | -0.087 (0.093) | -0.118 (0.108) |
| Income Higher | | | -0.442*** (0.145) | -0.360** (0.156) |
| Occupation | | | Yes | Yes |
| [Ref. Strong leader very good] | | | | - |
| Strong leader fairly good | | | | -0.534*** (0.159) |
| Strong leader bad | | | | -0.461*** (0.156) |
| Strong leader very bad | | | | -0.406** (0.161) |
| Observations | 87,269 | 80,572 | 47,682 | 40,293 |
| Log Likelihood | -7,589.950 | -5,716.610 | -2,610.536 | -1,989.528 |
| Akaike Inf. Crit. | 15,183.900 | 11,499.220 | 5,319.072 | 4,077.056 |

Note:

*p<0.1; **p<0.05; ***p<0.01

Table A.6: Support for Government by Technique and Abstention (Logistic Regression)

| | <i>Dependent variable:</i> | | | |
|--------------------------------|----------------------------|-----------------------|-----------------------|-----------------------|
| | Abstention | | | |
| | (1) | (2) | (3) | (4) |
| Index 3 (0-10) | 0.2111*** (0.0094) | 0.1800*** (0.0112) | 0.1518*** (0.0176) | 0.1860*** (0.0205) |
| Female | | -0.036 (0.054) | -0.004 (0.089) | -0.022 (0.100) |
| Age | | -0.013*** (0.002) | -0.012*** (0.003) | -0.015*** (0.003) |
| Wave fixed effects | | Yes | Yes | Yes |
| Country fixed effects | | Yes | Yes | Yes |
| [Ref. Education Lower] | | | - | - |
| Education Middle | | | 0.365*** (0.104) | 0.329*** (0.117) |
| Education Upper | | | 0.536*** (0.143) | 0.510*** (0.160) |
| [Ref. Income Lower] | | | - | - |
| Income Middle | | | -0.072 (0.094) | -0.100 (0.109) |
| Income Higher | | | -0.406*** (0.145) | -0.317** (0.157) |
| Occupation | | | Yes | Yes |
| [Ref. Strong leader very good] | | | | - |
| Strong leader fairly good | | | | -0.480*** (0.160) |
| Strong leader bad | | | | -0.395** (0.157) |
| Strong leader very bad | | | | -0.380** (0.162) |
| Observations | 87,266 | 80,572 | 47,682 | 40,293 |
| Log Likelihood | -7,628.973 | -5,673.573 | -2,599.038 | -1,976.055 |
| Akaike Inf. Crit. | 15,261.950 | 11,413.150 | 5,296.077 | 4,050.111 |

Note:

*p<0.1; **p<0.05; ***p<0.01

Appendix B

Descriptive statistics

Table B.1: Support for rule by experts (E115)

| Rule by Experts % | |
|-------------------|-------|
| Very good | 13.00 |
| Fairly good | 42.00 |
| Fairly bad | 30.00 |
| Very bad | 16.00 |

Table B.2: Ideological party preference (E179mod)

| Statistic | N | Mean | St. Dev. | Min | Max |
|------------------------------|--------|--------|----------|--------|-------|
| Ideological Party Preference | 11,946 | -0.067 | 0.365 | -0.790 | 1.000 |

Table B.3: Abstention (E179abs)

| Abstention | |
|------------|-------|
| 0 | 98.00 |
| 1 | 2.00 |

Table B.4: Technocratic mentality indexes

| Statistic | N | Mean | St. Dev. | Min | Max |
|-----------|--------|-------|----------|-------|-------|
| Index 1 | 87,266 | 0.438 | 0.258 | 0.000 | 1.000 |
| Index 2 | 87,269 | 0.672 | 0.134 | 0.233 | 1.000 |
| Index 3 | 87,266 | 0.311 | 0.239 | 0.000 | 1.000 |

Table B.5: Education level (X025R)

| | Education % |
|--------|-------------|
| Lower | 34.00 |
| Middle | 42.00 |
| Upper | 25.00 |

Table B.6: Income level (X047mod)

| | Income |
|--------|--------|
| Lower | 36.00 |
| Middle | 39.00 |
| Higher | 25.00 |

Table B.7: Occupation (X036)

| | Occupation |
|---|------------|
| "Employer/manager" | 6.00 |
| "Middle level non-manual office worker" | 1.00 |
| "Supervisory Non manual -office worker" | 7.00 |
| "Junior level non manual" | 2.00 |
| "Non manual -office worker" | 13.00 |
| "Foreman and supervisor" | 3.00 |
| "Skilled manual" | 16.00 |
| "Semi-skilled manual worker" | 8.00 |
| "Unskilled manual" | 9.00 |
| "Farmer: has own farm" | 3.00 |
| "Agricultural worker" | 2.00 |
| "Member of armed forces" | 1.00 |
| "Never had a job" | 12.00 |
| "Other" | 0.00 |

Table B.8: Wave (S002)

| | Wave |
|-----------|-------|
| 1981-1984 | 9.00 |
| 1989-1993 | 13.00 |
| 1994-1999 | 31.00 |
| 1999-2004 | 17.00 |
| 2005-2007 | 29.00 |

Table B.9: Gender (X001)

| | Gender |
|--------|--------|
| Male | 48.00 |
| Female | 52.00 |

Table B.10: Age (X003)

| Statistic | N | Mean | St. Dev. | Min | Max |
|-----------|--------|--------|----------|-----|-----|
| Age | 80,631 | 43.385 | 16.835 | 14 | 98 |

Figure B.1: Country (S003)

| Country/region | | Frequency | Percent |
|-----------------------|------------------|------------------|----------------|
| Valid | "Australia" | 4697 | 5.4 |
| | "Canada" | 4095 | 4.7 |
| | "Chile" | 4700 | 5.4 |
| | "Czech Republic" | 2071 | 2.4 |
| | "Estonia" | 1021 | 1.2 |
| | "Finland" | 3004 | 3.4 |
| | "France" | 1001 | 1.1 |
| | "Germany" | 4090 | 4.7 |
| | "Hungary" | 2114 | 2.4 |
| | "Israel" | 1199 | 1.4 |
| | "Italy" | 1012 | 1.2 |
| | "Japan" | 5727 | 6.6 |
| | "South Korea" | 5868 | 6.7 |
| | "Mexico" | 8827 | 10.1 |
| | "Netherlands" | 1050 | 1.2 |
| | "New Zealand" | 2155 | 2.5 |
| | "Norway" | 2152 | 2.5 |
| | "Poland" | 3091 | 3.5 |
| | "Slovakia" | 1561 | 1.8 |
| | "Slovenia" | 2044 | 2.3 |
| | "Spain" | 5130 | 5.9 |
| | "Sweden" | 3016 | 3.5 |
| | "Switzerland" | 3853 | 4.4 |
| | "Turkey" | 7681 | 8.8 |
| | "Great Britain" | 2134 | 2.4 |
| | "United States" | 3991 | 4.6 |
| | Total | 87284 | 100.0 |

Figure B.2: Countries

Table B.11: Anti-democratic values (E114)

| | <u>Strong leader</u> |
|-------------|----------------------|
| Very good | 8.00 |
| Fairly good | 22.00 |
| Bad | 31.00 |
| Very bad | 39.00 |

Appendix C

Images, tables and variables

WVS variables included in the technocratic mentality index:

1. How interested would you say you are in politics? (1) Very interested (2) somewhat interested (3) not very interested (4) not at all interested. (A004)
2. For each of the following indicate how important it is in your life. Politics. Would you say it is (1) very important (2) rather important (3) not very important (4) not at all important?
3. I'm going to read out some forms of political action that people can take, and I'd like you to tell me, for each one, whether you have done any of these things, whether you might do it or would never under any circumstances do it: Signing a petition. (1) Have done (2) might do (3) have never done.
4. I'm going to read out a list of various changes in our way of life that might take place in the near future. Please tell me for each one, if it were to happen, whether you think it would be a good thing, a bad thing, or don't you mind? More emphasis on technology. (1) Good (2) don't mind (3) bad.
5. If you had to choose, which one of the things on this card would you say is most important? (1) Give people more to say (2) fighting rising prices (3) protecting freedom of speech.
6. People can only get rich at the expense of others vs. Wealth can grow so there's enough for everyone (1-10). (1) People can only get rich at the expense of others (10) Wealth can grow so there's enough for everyone

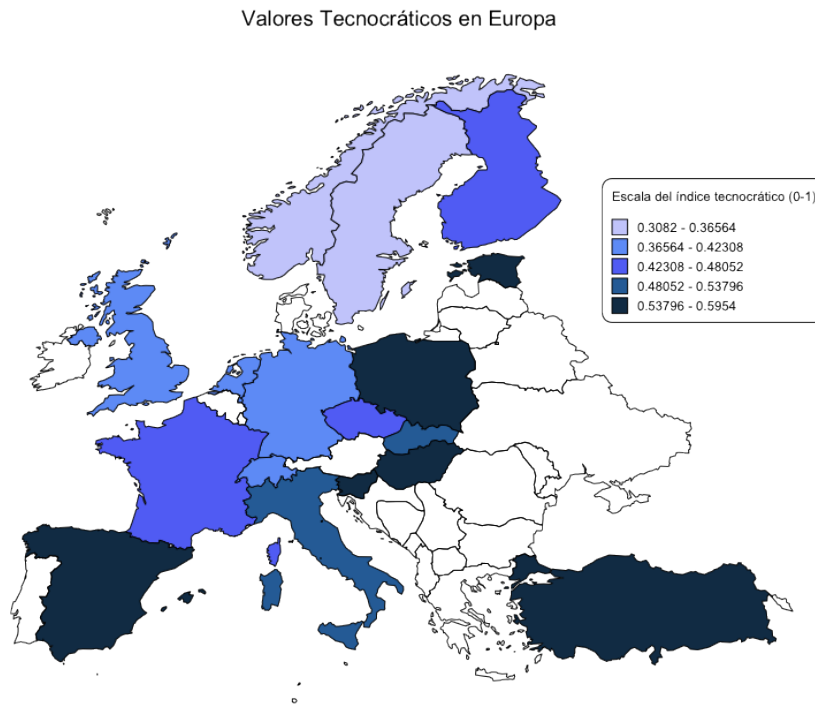


Figure C.1: Technocratic attitudes in Europe

Table C.1: Technocratic Attitudes, Education and Abstention (Interactive Logistic Regression)

| | <i>Dependent variable:</i> | | | |
|--------------------------|----------------------------|----------------------|----------------------|---------------------|
| | Abstention | | | |
| | (1) | (2) | (3) | (4) |
| Index 1 | 1.834*** (0.098) | | 1.292*** (0.158) | 0.723** (0.306) |
| Education Middle | | -0.530*** (0.061) | -0.707*** (0.150) | -0.472* (0.270) |
| Education Upper | | -0.853*** (0.082) | -1.370*** (0.192) | -0.308 (0.319) |
| Controls | | | No | Yes |
| Index 1*Education Middle | | | 0.652*** (0.248) | 1.352*** (0.437) |
| Index 1*Education Upper | | | 1.714*** (0.335) | 1.452*** (0.547) |
| Observations | 87,266 | 69,607 | 69,604 | 40,293 |
| Log Likelihood | -7,692.793 | -6,449.783 | -6,312.976 | -1,983.247 |
| Akaike Inf. Crit. | 15,389.590 | 12,905.570 | 12,637.950 | 4,068.494 |

Note:

*p<0.1; **p<0.05; ***p<0.01

Correlations

| | | INDEX1t | INDEX2t |
|---------|---------------------|---------|---------|
| INDEX1t | Pearson Correlation | 1 | .898** |
| | Sig. (2-tailed) | | .000 |
| | N | 1558 | 1558 |
| INDEX2t | Pearson Correlation | .898** | 1 |
| | Sig. (2-tailed) | .000 | |
| | N | 1558 | 1558 |

** . Correlation is significant at the 0.01 level (2-tailed).

Figure C.2: Correlation between index 1 and 2.

Correlations

| | | INDEX1t | INDEX3t |
|---------|---------------------|---------|---------|
| INDEX1t | Pearson Correlation | 1 | .837** |
| | Sig. (2-tailed) | | .000 |
| | N | 1558 | 1558 |
| INDEX3t | Pearson Correlation | .837** | 1 |
| | Sig. (2-tailed) | .000 | |
| | N | 1558 | 1558 |

** . Correlation is significant at the 0.01 level (2-tailed).

Figure C.3: Correlation between index 1 and 3.

Coefficients^a

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|-------|------------|-----------------------------|------------|---------------------------|--------|------|
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | 1.196 | .149 | | 8.024 | .000 |
| | meanHDI | -.893 | .182 | -.707 | -4.892 | .000 |

a. Dependent Variable: INDEX1

Figure C.4: Regressing the Human Development Index on the Technocratic Index

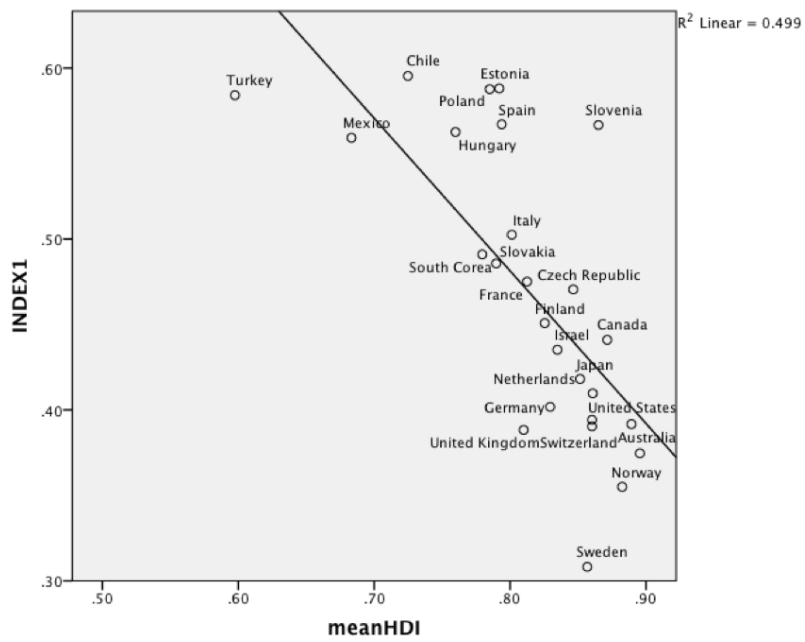


Figure C.5: Human Development Index and average scores of the Technocratic Mentality Index.