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I wanna live my life: Locus of Control and Support
for the Welfare State

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Abstract

Luděk Kouba and Hans Pitlik: **I wanna live my life: Locus of Control and Support for the Welfare State.**

The purpose of this paper is to propose a general informal institution determining human ways of thinking and codes of behaviour, thus, in our case, individual support for the Welfare State. For that reason, we recommend employing the two closely related and complementary psychological concepts – locus of control and self-efficacy. We follow a comprehensive concept of the Welfare State, measuring attitudes towards government intervention and income redistribution, using the survey data from the World Values Survey, as well as different indicators for perceived governance quality. Our empirical results show that people with an internal locus of control and high self-efficacy believing in their ability to control their own lives report substantially less positive attitudes towards income equalization and government interventions. Additionally, a higher confidence in government actors and low confidence in major private companies amplify the Welfare State preferences under an external locus of control.

Key words

Locus of control, life control, self-efficacy, informal institutions, Welfare State

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Introduction

Recently, there has been an intensive discussion about a future of the Welfare State, not only in Europe. Literature on Welfare State reforms traditionally focuses on the (political) supply side (Rodrik, 1996; Pitlik and Wirth, 2003; Heinemann, 2004; Starke 2006; Vis and van Kersbergen, 2007). On the other hand, the 'demand side' of the Welfare State, meaning the public's acceptance of the reforms, is still under-researched. Generally, three broad groups of factors can form people's attitudes to the Welfare State: individual self-interest (mainstream economics), governance quality (in particular, political economy), and informal institutions (in particular, new institutional economics). In this paper, we especially focus on the third area.

According to North (1990), Raiser (1997), Parlevliet (2007) or C. Williamson (2009), informal institutions can be understood as conventions, customs, habits, moral values, social norms, social rules, taboos, or traditions that determine human behaviour. Therefore, the prevailing conception of informal institutions includes both rules and behavioural practices. In contemporary research, the terms *informal institutions* and *culture* are often used with a related and overlapping meaning. Nevertheless, we follow Church (2000), D'Orlando, Ferrante and Ruiu (2010) and Ruiu (2012) who distinguish culture from personality: while cultural beliefs are a social construct, psychological traits (institutions) belong to the individual sphere.

The purpose of this paper is to propose a general informal institution determining human ways of thinking and codes of behaviour, thus, in our case, individual support for the Welfare State. Instead of trust, which is by far the most frequently investigated concept in topical literature, we suggest focusing on individual perceptions of control over one's life. Nonetheless, in economic literature, the concepts of control are used in a rather fragmentary way. For that reason, we aim for a multidisciplinary approach to applying the concepts from psychology and sociology to Welfare State preferences in a more coherent way. As a consequence, we recommend employing these two closely related and complementary psychological concepts – locus of control and self-efficacy. In addition to that, the World Values Survey provides data on *life control* matching the features of these theoretical concepts very well.

In this paper, therefore, we address the main hypothesis: People with an internal locus of control and high self-efficacy have weaker preferences for government activities in the Welfare State area. Furthermore, we follow North's classic definition of institutions (1990) emphasizing the importance of compatibility between formal and informal institutions. Therefore, we address the second

hypothesis: People tend to be more sceptical about government activities if (individually) perceived government quality is weak.

Regarding the Welfare State delimitation, we employ a comprehensive concept. The idea is not to derive 'demand factors' for specific state functions (say, provisions for health care, disability, unemployment, or old age), but to assess the impact of informal institutions on the broader view of the public on the appropriate role of the state. In order to do that, we focus on the two broadly-defined dimensions of the Welfare State: government interventions and income equalization. For the purpose of our empirical analysis, we use the survey data from the World Values Survey/European Values Study, as well as different indicators, for the measuring of governance quality on a sample of around 120,000 individuals in 37 developed OECD and EU Member States over a period of 1990 to 2008. Since cross-country information about the relationship between interventionist attitudes and control levels is difficult to interpret causally, we investigate individual level data (in combination with national level data), as this has the advantage of alleviating endogeneity concerns (Landier, Thesmar, and Thoenig, 2008).

We start in Section 2 by discussing the role of informal institutions and culture in the shaping Welfare State attitudes. Section 3 reviews some of the main psychological and sociological contributions to the theory of control. Additionally, this section develops our theoretical framework and the main hypothesis towards Welfare State attitudes and thus sets the stage for the empirical analyses. Section 4 proceeds with a discussion of the data, measurement issues and estimation method. In section 5, the results are provided. Section 6 summarizes and concludes.

1 Informal institutions and culture in the shaping Welfare State attitudes

The notion that institutions channel the behaviour of individuals and - as a consequence - also matter for economic performance of nations has gained a lot of attention over recent decades. Institutions have been intensively discussed for a long time as so-called deeper causes of economic development. In that respect, many authors acknowledge North's definition as "... rules of the game in a society or, [...] the humanly devised constraints that shape human interaction" (North, 1990: 3). North (1990: 4) further notes that these constraints include both "formal written rules as well as typically unwritten conduct of behaviour that underlie and supplement formal rules", i.e. formal *and* informal institutions. Compatibility between formal and informal institutions is desirable for successful economic development. The simple reason is that people must be able to understand formal rules to behave according to them. Moreover, they should willingly accept and support the formal rules in place.

Many papers concerned with the relationship of institutions and economic success yet deal in fact only with genuine economic and political institutions, and numerous papers stress the essential role of *formal governance* structures for development and growth (e.g., Knack and Keefer, 1995; Mauro, 1995; Hall and Jones, 1999; Engerman and Sokoloff, 2003; Rodrik, Subramanian and Trebbi, 2004; Acemoglu, Johnson and Robinson, 2004; Djankov, 2009; Acemoglu and Robinson, 2012; Bjørnskov, 2012; Rode and Coll, 2012).

Besides inevitable problems of measurement, analysis of informal institutions suffers from ambiguous definitions and terminology. For example, Parlevliet (2007: 45) identifies informal rules with taboos, customs, traditions and social norms. Raiser (1997: 2) interprets informal institutions as a collection of social norms, conventions and moral values. Claudia Williamson (2009: 372) refers to informal institutions as private constraints stemming from norms, culture and customs that emerge spontaneously. Furthermore, in contemporary research, the term *informal institutions* is often used in a strongly related and overlapping meanings as the terms *culture* and *social capital*.

Culture-based explanations for economic phenomena can already be found in seminal works of Adam Smith, John Stuart Mill and Karl Marx. Perhaps the most famous contribution dealing with economic effects of culture – The Protestant Ethic and the Spirit of Capitalism – by Max Weber (1930) is more than a century old. Since the early 1990s (particularly Putnam, 1993), a wave of new approaches emerged which re-attracted attention to the role of culture for economic development (Guiso, Sapienza and Zingales, 2006; Tabellini, 2010; Williamson and Kerekes, 2011; Mathers and Williamson, 2011; Shoham and Malul, 2012) or in the shaping formal political and economic

institutions (Licht, Goldschmidt, and Schwarz, 2007; Tabellini, 2008). Tabellini (2008: 259) identifies culture as "beliefs about the consequences of one's action, where such beliefs are purposefully manipulated by earlier generations or by deliberate experimentation."¹ Guiso, Sapienza and Zingales (2006b: 2) focus on persistence and define culture as "... customary beliefs and values that ethnic, religious, and social groups transmit fairly unchanged from generation to generation."

Similarly, as regards social capital, Putnam (1993: 167) defines it as "features of social organizations, such as trust, norms, and networks that can improve the efficiency of society by facilitating coordinated action." Another popular definition is provided by Knack and Keefer (1997: 1251), as "trust, cooperative norms, and associations within groups." Nevertheless, almost exclusively sociologists have discussed this concept of social capital.

In literature on economics, both concepts of informal institutions and culture are frequently used. In this paper, in accord with North's definition, we prefer the term informal institution as the most general and predominantly economic concept, which enables to include the highest number of partial terms and conceptions. Furthermore, to achieve our purpose, it means to address *individual* ways of thinking, we follow Church (2000), D'Orlando, Ferrante and Ruiu (2010) and Ruiu (2012) who distinguish culture from personality. Whereas cultural beliefs are a social construct, psychological traits (institution) belong to the *individual* sphere. These psychological traits are determined by genetic inheritance, individual experiences and considerably degree by cultural environment as well. Moreover, according to Verheul, Wennekers, Audretsch and Thurik (2002), institutions are observable, while culture is not observable. Ruiu (2012) adds that culture is not directly visible but manifested through behaviours.

In line with the definition, we interpret informal institutions as particular ways of thinking and codes of behaviour. The simple idea, then, is that basic beliefs affect one's attitudes and (economic) decision-making and thus increase the predictability of individual behaviour. Core beliefs about oneself and the relation of the individual to society will almost certainly shape attitudes towards the formal institutions of the Welfare State and personal preferences for its main functions, redistribution and provision of services:

The main case of the paper is that people are willing to confer an important role to government only if that is in line with their core beliefs.

¹ Following Tabellini (2008), a more traditional understanding defines culture as "social conventions and individual beliefs that sustain Nash equilibria as focal points in repeated social interactions or when there are multiple equilibria."

A crucial problem in that respect is that despite growing research interest, we still do not have a clear understanding *which* beliefs and traits have a decisive impact on economically relevant behaviour. A generally accepted economic or psychological model that transforms social values and beliefs into attitudes and human behaviour does not yet exist.² Analyzing literature on informal institutions and culture, (social) trust is by far the most frequently investigated concept. However, in another paper (Pitlik, Kouba, 2014), we show that trust is a relatively weak predictor in terms of a demand for the Welfare State; our empirical results indicate that social trust is generally associated with higher support for the Welfare State only if perceived quality of administration is high and confidence in companies is low. However, the goal of this paper is to propose and argue a general informal institution determining human ways of thinking and codes of behaviour, hence in our case, support for the Welfare State. Instead of trust, thus, we suggest to focus on individual perceptions of control over one's life. The theory of control and its implication for shaping Welfare State attitudes is elaborated in the next section.

2 Theory of Control and Welfare State attitudes

2.1 Fatalism, locus of control, self-efficacy, autonomy freedom

First of all, we have to emphasize that the concepts related to control have remained surprisingly omitted in economics, in particular, when comparing it to psychology and sociology, where the theory of control has been developing thoroughly for many decades. Despite this neglect, it is naturally possible to find particular economic papers where various derivatives from this concept of control have been used, nevertheless, in our point of view, usually not in an entirely systematic way. Therefore, in this section, we focus on four concepts being relevant towards our goal – fatalism, locus of control, self-efficacy and autonomy freedom – more elaborately.

Finding inspiration from sociology, we want to highlight *fatalism* as a rather promising concept regarding the matter of Welfare State attitudes. Whelan (1996) defines fatalism in a strict way as “a system of beliefs which holds that everything has an appointed outcome which cannot be altered by effort or foreknowledge”. Similarly, according to D’Orlando, Ferrante and Ruiu (2010, p. 10), fatalism “can be linked with people’s propensity to believe that their destinies are ruled by an unseen power – Fate – rather than by their will”. In sociology, there are two classical theories on the origins of fatalism: structural fatalism by Durkheim from 1897 (republished 1951) and cosmological fatalism by

² Hence, the search for empirical regularities is often guided primarily by common sense. Such a pragmatic approach also enables to cover behavioural practices that can hardly be separated from norms, values or beliefs.

Weber (1930). Recently, using the WVS data, Ruiu (2012) supported Durkheim's idea that a more regulated society tends to be more fatalistic as well, which is a direct link to our story.

Regarding economic literature, other involved authors also state that *fatalism* is still a (surprisingly) neglected concept, in contrast to *sociology* (Ruiu, 2012) or in contrast to *trust* within the literature on institutions (D'Orlando, Ferrante and Ruiu, 2010). Close to our focus, although rather implicitly (an explicit stress on *luck*), the concept of fatalism can be identified in the texts on redistribution issues by Alesina (e.g. Alesina, Glaeser and Sacerdote, 2001; Alesina and Angeletos, 2005; Alesina and Giuliano, 2009). These papers point out, among other things, the strong positive correlation between the share of social spending on GDP and the share of people thinking that income is determined mostly by luck. This conclusion is again in accordance with our line of reasoning. Furthermore, D'Orlando, Ferrante and Ruiu (2010) provide an interesting and unique application of the fatalism concept to labour market institutions. The authors emphasize the interaction between culture and institutions in the determination of economic performance understanding culture as a social contrast while understanding institutions as individual beliefs with their roots in social psychology. Similarly to us, D'Orlando, Ferrante and Ruiu focus on two main beliefs, *trust* and *fatalism* (our control), and find: trust is negatively related to the demand for job security while fatalism has a positive relation to the demand for job security.

Finally, Bernard, Dercon and Taffesse (2012) provide the most coherent theoretical contribution on fatalism and economic behaviour. Their paper focuses on the relationship between fatalistic beliefs and the attitudes towards investment in rural areas of Ethiopia, which is another partial strand of literature on fatalism differing from our scope; similarly, e.g. Shapiro and Wu (2011) focus on the relationship between fatalism and savings. However, Bernard, Dercon and Taffesse go deeper than fatalism – they deal with the psychological concepts locus of control and self-efficacy as well as with the framework of aspiration failure.

In a nutshell, fatalism is a concept that is to a large degree compatible with our theory: people with fatalistic tendencies have a low level of control over their lives, thus, they have a tendency towards (anti-individualistic) pro-Welfare State attitudes. Nevertheless, the delimitation of fatalism (*fate*, *luck*) is still rather vague. On the contrary, when analysing literature on psychology, *locus of control* seems to be a concept closely related to fatalism, furthermore, with a high potential to become a general informal institution that explains many areas of human behaviour, including support for the Welfare State.

Rotter had already developed the locus of control concept in 1966. Rotter summarizes that (1990: 489) “internal versus external control refers to the degree to which persons expect that a reinforcement or an outcome of their behaviour is contingent on their own behaviour or personal characteristics versus the degree to which persons expect that the reinforcement or outcome is a function of chance, luck, or fate, is under the control of powerful others, or is simply unpredictable.” In other words, people who perceive a high internal locus of control believe in people’s ability to control their life course and to influence the world around them. They interpret their life course as being at their own disposition and that their personal choices are the main cause of individual success or failure. On the other side of the spectrum, people who have a high external locus of control believe that control over events is largely outside their sphere of influence. In addition, Skinner (1996, p. 552) in his systematic survey on control divides *internal* causes into *actions* versus *attributes*. While actions can be associated with behaviour, responses or efforts, attributes with ability, personality or genetic makeup. Analogically, *external* causes can be divided into those that are under the control of “powerful others” and those that are beyond human control. The former can be identified with the system, institutions or society, the later with chance, luck, fate, nature or God.

In literature on psychology, we can find some studies explicitly examining the impact of the locus of control on economic behaviour. This concept is rather frequently examined in its relationship to organizational commitment. Irving, Coleman and Cooper (1997) point out that people with an internal locus of control are usually more affectively committed to both their organizations and their careers. Similarly, Luthans, Baack and Taylor (1987) remark that people with an internal locus of control tend to be committed to the organizations allowing them this control. Analysing the labour market matters as well, Judge and Bono (2001) prove that locus of control in high intercorrelation with three other personality traits – self-esteem, generalized self-efficacy and emotional stability – belong among the best predictors of job satisfaction and job performance. Additionally, Judge and Hurst (2007) claim that locus of control together with the other three personality traits predicts income at midlife; furthermore, individuals with positive so-called core self-evaluations are the most likely to capitalize on their early advantages and turn them into later economic success.

In addition to that, in literature on psychology, the link between locus of control, happiness and well-being is frequently studied, e.g. Noor NM (2002), Peterson (2003), April, Dharani and Peters (2012). However, only a few papers dealing with this relationship could also be identified within literature on economics. Ng, Sorensen and Eby (2006) offer a meta-analysis focused on the relationship between locus of control and well-being at work. Nevertheless, as we see it, Verme (2009) provides a

promising application of the theory of control onto economics. The author refers to psychology claiming as well that the locus of control affects how people evaluate freedom of choice. So called “internals” believe that they have control of their lives and that the outcomes of their actions are the consequences of their own effort and skills, and thus appreciate more freedom of choice as a source of an increment in happiness. Furthermore, Bernard, Dercon and Taffesse (2012) discussed the locus of control in the determining of well-being, however, just as a supportive theory to the concepts of self-efficacy and aspirations failure.

To sum up, the concept of the locus of control, vital in psychology but broadly ignored in economics, aspires to being used as a general informal institution affecting human codes of behaviour. People with an internal locus of control tend to have rather individualistic attitudes, thus, voting for a smaller Welfare State. Comparing this to the concept of fatalism, we consider the locus of control to be a better-elaborated concept. We can say – fatalistic people have an external locus of control, nevertheless, within the concept of a locus of control, we can identify a more coherent structure of reasons for either external or internal locus of control, see above the four modes described by Skinner (1996). On the other hand, also within the locus of control concept, we can identify a potential minor weak point: the internal causes that Skinner calls *attributes*. Generally, there is no doubt that people can successfully try to modify their responses or put more effort into their behaviour; in other words, to change their *actions*. Nonetheless, what about such features (attributes) as talent or attractiveness? If talent is decisive for a potential success, is it meaningful to talk about internal control, anyway? In addition to that, as another instance, a tennis player could believe that six-hour-long training every day would guarantee success, however, not believe that he is capable of such hard and purposeful work. For that reason, talking about the (internal) locus of control, it is highly recommendable to take the matter of *competence* or *self-determination* into account (see next section).

Further to these partial reservations, we can remark that in psychology there is another very close concept to the locus of control, which is mentioned only sporadically in literature on economics – *self-efficacy*. This concept was developed in a classic psychological paper by Bandura in 1977 and refers to (Bandura, 1989, p. 1175) “*people’s beliefs about their capabilities to exercise control over events that affect their lives. Self-efficacy beliefs function as an important set of proximal determinants of human motivation, affect, and action.*” This definition clearly demonstrate the closeness of both related concepts, however, Bandura remarks that even if individuals believe that behaviour can generally affect outcomes, they won’t exercise control without belief in their personal

capabilities to produce such purposeful behaviour. In addition, Boyd and Vozikis (1994) summarise the fragments of knowledge of the fact that the locus of control is a generalized concept comprising a broad spectrum of situations whereas self-efficacy is rather a task-specific construct. It means that individuals may dispose of the internal locus of control in general, but may have low self-efficacy towards particular specific tasks.

With regard to these fine distinctions, the self-efficacy concept seems to be an even slightly more appropriate theoretical concept regarding our analysis of individual attitudes towards the Welfare State. On the other hand, the occurrence of self-efficacy in economics is probably even scarcer than the locus of control (and fatalism). We are only aware of the (abovementioned) paper by Bernard, Dercon and Taffesse (2012), moreover, also these authors mention self-efficacy as one of a few conceptions "behind fatalism".

In order to supplement our survey focused on the theoretical concepts of control being used in economic literature, we should mention *autonomy freedom* as explained by Bavetta and Peragine (2006) and particularly by Bavetta, Bottero and Navarra (2008). These authors distinguish between objective and subjective freedom. While objective freedom is about having opportunities to choose from, subjective freedom is related to one's autonomy or, broadly composed, to the control over one's life. Hence, their approach is in fact also in accordance to our framework. Nevertheless, comparing it with the concepts of the locus of control or self-efficacy, we consider autonomy freedom rather as a necessary condition for control than a sufficient one.

Besides the four relevant concepts being discussed in this section, it is possible to mention many other psychological and sociological concepts closely related to control, both explicitly using the term control and without explicitly using it. Regarding the former, there are, e.g. *action control, cognitive control, decisional control, outcome control, personal control, sense of control*. Regarding the later, there are, e.g. *autonomy, contingency, effectiveness, causal attributions, helplessness, mastery, probability of success*. Moreover, Skinner (1996) in the Appendix provides a list of about 100 constructs of control and their definitions. Because of this terminological inconsistency and rather random use of these constructs in literature on economics, we have made an effort to offer a more coherent application of the control theory into economics.

2.2 A coherent framework to control: perceived control, agent-ends relations and competence

First of all, we should touch on the distinction between *objective* and *subjective* control. Skinner (1996) remarks that the former can be called *actual* control as well and is related to the person and the context; whereas the later is typically named *perceived* control and can be associated with an individual's beliefs about how much control is available. According to many papers on psychology (Averill, 1973; Langer, 1979; Burger, 1989), perceived control is a stronger determinant of human behaviour than actual control: a person must be aware of an actual gain or loss of control to be psychologically affected by an objective gaining or losing of it. In accordance with this idea, we approach control as *perceived* control in our framework.

Secondly, having discussed the particular concepts on control in the previous part, we have pointed out often only the fine differences and several times the considerable overlapping among them. To cope with this fact, we refer to a classification provided by Skinner (1996) based on the distinction between *agents*, *means* and *ends* of control. Agents are understood as individuals or groups who exert control (self, personal, collective), means as ways in which control is exerted through them (actions, attributes, abilities, behaviour, efforts, personality; fate, God, institutions, luck), and ends as desired and undesired outcomes over which control is exerted (performance, consequences). Further to this, Skinner distinguishes three kinds of relations: means-ends, agent-means and agent-ends reactions.

Applying this classification on our four concepts discussed in the previous part, we can classify locus of control and fatalism as means-ends relations since these refer to the link between causes and desired and undesired outcomes. Nevertheless, we agree with Skinner (1996) that the connections between people and outcomes, in other words agent-ends relations, prescribe "*the prototypical definition of control*". Within this logic, we consider the concept of self-efficacy to be an example of agent-ends relations, thus being the most appropriate to our framework.

Thirdly, we should specify the aspect of *competence* in the theory of control as being unambiguously present in the case of self-efficacy, and a slightly hazy in the case of the locus of control. The need for competence should not be confused with the need for self-determination or autonomy. Deci and Ryan (1985:31) argue, "There are very important differences between the concepts of control and self-determination. Control refers to there being a contingency between one's behaviour and the outcomes one receives, whereas self-determination refers to the experience of freedom in initiating one's behaviour." Following this idea, we can exclude such concepts as *autonomy freedom* discussed by Bavelas et al (2006, 2008) from the factual area of control theory.

To summarize, a general informal institution being based on the theory of control should have the subsequent features: perceived (subjective) control, agents-ends relations and competence. In our opinion, the self-efficacy concept fulfils these criteria the best. On the other hand, we also take into account the incidence in literature, moreover, the information capability of the term *control* itself. For these reasons, we recommend basing a general informal institution broadly affecting human behaviour, and in our case, determining Welfare State attitudes, on the two closely related and complementary concepts – locus of control and self-efficacy. Furthermore, the World Values Survey provides the data on *life control* in accordance with these criteria for agents-ends relations theory.

Hypothesis 1:

People with an internal locus of control and high self-efficacy have weaker preferences for government activities in the Welfare State area.

3 Data, measurement and model

3.1 Measuring Welfare State attitudes

Measuring political attitudes has been a subject of many public opinion surveys with different country and time coverage. As we aim to examine universal interventionist attitudes, we focus on general preferences towards the appropriate role of government. We restrict the sample to observations from 37 developed OECD- and EU-Member States (see Appendix), and employ four distinct survey questions³ from the World Values Survey and the European Values Study:

- Income equalization: "Incomes should be made more equal vs. We need larger income differences as incentive."
- State ownership: "Private ownership of business should be increased vs. Government ownership of business should be increased."
- Government responsibility: "People should take more responsibility to provide for themselves vs. The government should take more responsibility to ensure that everyone is provided for."

³ The basic attitude question is formulated as "Now I'd like you to tell me your views on various issues. How would you place your views on this scale? 1 means you agree completely with the statement on the left; 10 means you agree completely with the statement on the right; and if your views fall somewhere in between, you can choose any number in between." All items were polled for the first time in 1989/90.

- Competition attitudes: "Competition is good. It stimulates people to work hard and develop new ideas vs. Competition is harmful. It brings out the worst in people."

We re-coded the responses to a scale ranging from 0 to 1, such that preferences for stronger government involvement in the economy (more redistribution, state ownership, and government responsibility, less competition) receive higher values. We argue that *government responsibility*, *state ownership* and *competition attitudes* assess similar attitudes for or against active government involvement in the process of resource allocation, while *income equalization* is a measure of preferences for redistributive goals. Spearman's rank order correlations at the individual level confirms for a total of 143,924 observations that all attitudes measures are positively correlated at a 1%-level of significance, although the relationship between *income equalization* and the three other measures is weaker than the correlation among *government responsibility*, *state ownership* and *competition* attitudes.

To make the following analyses more tractable, we calculated the first principal component of *government responsibility*, *state ownership* and *competition attitude* measures to come up with a single measure for *government intervention*.⁴ The newly created variable is normalized to a 0-1 scale, higher scores indicating stronger preferences for intervention. By construction, *government responsibility*, *state ownership* and *competition attitude* are strongly correlated with *government intervention*, (Spearman's rho between +0.65 and +0.76). On the contrary, *income equalization* and *government intervention* are only weakly but positively connected (Spearman's rho = +0.15).

3.2 Measuring informal institutions and the perceived quality of formal institutions

To test our hypotheses, we further consider core beliefs on control and confidence in state/major companies for which data are provided by the WVS/EVS.

- Perception of life control – the key proxy for our theoretical framework on control is based on the following question: "Some people feel they have completely free choice and control over their lives, while other people feel that what they do has no real effect on what happens to them. Please use this scale [between] "none at all" and ... "a great deal" to indicate how much freedom of choice and control you feel you have over the way your life turns out." It follows that the life control variable is fully with accordance with the concepts of locus of control and self-efficacy; moreover, it fulfils the criteria of perceived control, agents-ends

⁴ Calculated factor scores are: Government responsibility (0.44), State ownership (0.51) and Competition attitude (0.47).

relations and competence. We re-coded the responses to a 0-1-scale with higher values indicating a stronger feeling of own life control.

- Confidence in administration (government actors): "I am going to name a number of organisations. For each one, could you tell me how much confidence you have in them: is it a great deal of confidence, quite a lot of confidence, not very much confidence or none at all?" Among the listed institutions are civil service, government and parliament. We use confidence in civil service as a proxy for the individual assessment of administrative quality (*confadmin*).⁵ We re-coded the variable to a 0-1 scale such that higher values indicate higher confidence.⁶
- Confidence in major companies (*confcomp*): As regards our second hypothesis, we suppose people, who do not trust big companies, to be more supportive of government intervention and Welfare State provisions.⁷ We re-coded the response to a 0-1-scale, higher values indicating a stronger confidence in major companies.
- Legal quality: Additionally, we employ the indicator legal quality, which refers to a macro measure of governance quality from the Economic Freedom of the World-data set (EFW). We re-coded the original index to a 0-1-scale, higher values reflecting a higher quality.

Besides the main purpose of the paper, in accord with North's definition (1990) emphasizing compatibility between formal and informal institutions, we address the conditional effects between informal institutions and the perceived quality of institutional framework as well. The willingness to delegate important responsibilities for income equalization and provision of certain services to politicians and bureaucrats probably also depends on the perceived problem-solving capacity of the government. Using data for 29 European countries from the European Social Survey Welfare State module, conducted in 2008, Svallfors (2012) for example finds that the quality of government has a significant impact on public opinion about taxes and spending. People who perceive government

⁵ In less than 3 percent of all cases, we had to impute data for *confadmin*. Imputed data were obtained as predicted values from a regression of confidence in civil services on confidence in government and in parliament, country and year fixed effects. Our results do not change, if we employ only non-imputed data, however.

⁶ Suitability of institutional confidence indicators to assess governance quality is controversially debated (e.g. Newton and Norris, 2000; Bouckaert and van de Walle, 2003; Christensen and Laegreid, 2005; van de Walle, 2007). Yet, confidence in institutions is clearly related to the perceived performance of a respective actor. On the other hand, country means of confidence in public administration and expert's assessment of governance quality appear to coincide.

⁷ Nevertheless, the idea is that a high confidence in state actors does not necessarily go hand-in-hand with a more pro-interventionist attitude. If people trust big companies, we would expect them to be less supportive of government intervention but only to the extent that they have a comparably smaller trust in state actors.

institutions as efficient and fair have a more positive attitude towards both higher taxes and higher government expenditures.

Hypothesis 2:

People tend to be more sceptical about government activities if (individually) perceived government quality is weak.

Consequently, the second case the paper makes is that the impact of core beliefs on Welfare State attitudes is conditional on the perceived quality of governance structures.

3.3 Estimation method and model

Attitudes towards Welfare State reflect personal assessments of the desirability of certain policies and/or formal institutional arrangements and are probably shaped by various factors, namely: individual self-interest, perceived governance quality and informal institutions. Cross-country regressions of the relationship between informal institutions and Welfare State attitudes are, however, hard to interpret causally. Therefore, we employ individual level data in combination with national level data, as this has the advantage to alleviate endogeneity concerns (Landier, Thesmar, and Thoenig, 2008).⁸

Formally, we model Welfare State attitudes (WS_{ij}) of individual i in country j depending on internalized informal institutions (I_i), additional individual covariates (X_i), country-wide measures of governance quality Q_j and additional country-wide covariates Z_j . We then have an estimation equation

$$(1) \quad WS_{ij} = \beta_0 + \beta_1 I_i + \beta_2 X_i + \beta_3 Q_j + \beta_4 Z_j + \varepsilon_i.$$

The multi-level structure of the data generates problems for estimation, as level 1-observations are probably not independent within a country (level 2-units). Moulton (1990) demonstrates that in such a setting standard errors of all estimated parameters – especially for explanatory variables on the country-level – show a serious downward bias. A standard approach, then, is to estimate Ordinary Least Squares, and correct standard errors for clustering. Moreover, the problem of heterogeneity in the cross-country dimension is discussed in the pertinent empirical literature (e.g. Steenbergen and Jones, 2002; Primo, Jacobsmeier, and Milyo, 2007). To avoid the less satisfactory option of country-

⁸ In general, multilevel models conjecture that individual behaviour is a function of both individual-level and non-individual variables of a higher level, e.g. a region, a social group or a country, to which the individual belongs. Using data at the individual level increases the number of observations and precision of estimates considerably.

by-country regressions of (1), thus completely ignoring cross-country differences and contextual factors, we opted for a Least Squares Dummy Variable-model (LSDV) with indicator variables for all countries to get rid of unobserved heterogeneity. In a sample of $j = 1, 2, 3, \dots, k$ countries, equation (1) becomes

$$(1a) \quad WS_{ij} = \beta_0 + \beta_1 I_i + \beta_2 X_i + \beta_3 Q_j + \beta_4 Z_j + \alpha_1 D_1 + \alpha_2 D_2 + \alpha_3 D_3 + \dots + \alpha_{k-1} D_{k-1} + \varepsilon_i$$

Country fixed effects D_j account for unobservable characteristics that affect the support for Welfare State policies in a country and do not vary over time. They thus capture persistent institutional and socio-economic differences across countries that drive attitudes towards the Welfare State.

Contextual factors may also be modelled such that we take into account the possibility that the effect of informal institutions on Welfare State attitudes depends on the level of governance quality. We therefore estimate a cross-level interaction of the form

$$(2) \quad WS_{ij} = \beta_0 + \beta_1 I_i + \beta_2 X_i + \beta_3 Q_j + \beta_4 (I_i \times Q_j) + \beta_5 Z_j + \varepsilon_i.$$

The (marginal) impact of informal institution I_i on Welfare State attitude WS_{ij} is then given by

$$(3) \quad \frac{\partial WS_{ij}}{\partial I_i} = \beta_1 + \beta_4 Q_j,$$

if we condition on level 2-measures of governance quality Q_j .

The perceived governance quality can also be measured at an individual level. Compared to employing level 2-indicators of administrative quality Q_j , this has the big advantage that from a theoretical perspective, individual perceptions of government quality R_i should matter more for personal Welfare State attitudes than external expert's judgments. The relevant estimation equation, then, becomes

$$(2a) \quad WS_{ij} = \beta_0 + \beta_1 I_i + \beta_2 X_i + \beta_3 R_i + \beta_4 (I_i \times R_i) + \beta_5 Z_j + \varepsilon_i,$$

and the marginal effects of informal institutions are

$$(3a) \quad \frac{\partial WS_{ij}}{\partial I_i} = \beta_1 + \beta_4 R_i.$$

Individual-level covariates X_i are derived from the WVS/EVS, representing self-interest in government involvement. We include the following control variables: a gender dummy for *female*

respondents; *age* of a respondent⁹, a dummy for being *retired*; a dummy for *unemployed* individuals; *bad health* as health status of a respondent; dummies for *high* and *low income*; dummies for *high* and *low education*.

Macro control variables Z_j include a country's *unemployment rate* from AMECO database and real *GDP per capita* (in purchasing power parities, log-form) from the Penn World Tables 7.1 (Heston, Summers, and Aten, 2012). Summary statistics of all variables are in the Appendix.

4 Results

4.1 The base model of governance quality and Welfare State attitudes

The base model is purposed to test our second hypothesis: *People tend to be more sceptical about government activities if (individually) perceived government quality is weak*. The model includes the micro- and macro- covariates, and several measures of governance quality.

Table 1 illustrates the results of our baseline regressions of *income equalization* attitudes (columns 1-3) and *government intervention* attitudes (columns 4-6). Bold figures show non-standardized coefficients, and those in square brackets are standardized beta coefficients. The third line for each covariate displays p-values calculated from standard errors corrected for clustering. Our individual control variables behave as expected from the previous literature. The results are highly stable throughout all model specifications.

⁹ Age is divided by 10 only for better readable presentation of the results.

Table 1: Governance quality and Welfare State attitudes

dep. variable	income equalization attitude			government intervention attitude		
	(1)	(2)	(3)	(4)	(5)	(6)
quality indicator:	no	legal	confadmi	no	legal	confadmi
			n			n
quality indicator		0.517	0.048		0.097	0.041
		[0.195]	[0.039]		[0.058]	[0.053]
confcomp		0.009	0.000		0.325	0.000
		-0.105	-0.120		-0.086	-0.100
		[-0.086]	[-0.099]		[-0.112]	[-0.130]
female	0.029	0.028	0.028	0.030	0.030	0.030
	[0.047]	[0.046]	[0.045]	[0.078]	[0.078]	[0.077]
	0.000	0.000	0.000	0.000	0.000	0.000
age	-0.002	-0.002	-0.003	-0.006	-0.007	-0.007
	[-0.012]	[-0.012]	[-0.014]	[-0.056]	[-0.058]	[-0.061]
	0.090	0.101	0.052	0.000	0.000	0.000
retired	0.018	0.018	0.018	0.009	0.010	0.009
	[0.024]	[0.023]	[0.023]	[0.019]	[0.020]	[0.019]
	0.000	0.000	0.000	0.004	0.002	0.003
unemployed	0.048	0.042	0.044	0.039	0.037	0.038
	[0.036]	[0.032]	[0.033]	[0.046]	[0.044]	[0.045]
	0.000	0.000	0.000	0.000	0.000	0.000
bad health	0.067	0.056	0.059	0.076	0.068	0.070
	[0.050]	[0.041]	[0.043]	[0.089]	[0.079]	[0.081]
	0.000	0.000	0.000	0.000	0.000	0.000
income low	0.023	0.023	0.023	0.019	0.019	0.019
	[0.027]	[0.027]	[0.027]	[0.036]	[0.036]	[0.035]
	0.001	0.000	0.000	0.000	0.000	0.000
income high	-0.046	-0.045	-0.045	-0.024	-0.024	-0.024
	[-0.054]	[-0.054]	[-0.054]	[-0.045]	[-0.045]	[-0.045]
	0.000	0.000	0.000	0.000	0.000	0.000
education low	0.017	0.015	0.015	0.024	0.024	0.024
	[0.023]	[0.020]	[0.019]	[0.050]	[0.050]	[0.050]

	0.038	0.046	0.059	0.000	0.000	0.000
education high	-0.038	-0.040	-0.038	-0.012	-0.012	-0.012
	[-0.048]	[-0.051]	[-0.049]	[-0.024]	[-0.025]	[-0.025]
	0.000	0.000	0.000	0.006	0.004	0.002
unemployment	1.077	0.829	1.104	0.289	0.182	0.243
	[0.123]	[0.093]	[0.124]	[0.052]	[0.032]	[0.043]
	0.040	0.151	0.052	0.095	0.270	0.170
GDP per capita	0.171	0.065	0.186	-0.040	-0.067	-0.042
	[0.278]	[0.102]	[0.292]	[-0.105]	[-0.169]	[-0.106]
	0.091	0.638	0.098	0.327	0.133	0.294
N	126455	117311	116986	114757	107854	107616
R-sq. (adj.)	0.089	0.094	0.093	0.126	0.139	0.141
country FE	yes	yes	yes	yes	yes	yes
wave FE	yes	yes	yes	yes	yes	yes

Fixed effects OLS with standard errors adjusted for clustering at the country level. For each estimate, standardized beta-coefficients are reported in square brackets, followed by the cluster-robust p-value. Constant, country and survey wave effects not reported.

Including the governance quality indicators in specifications (2)-(3), and (5)-(6) respectively, we always find a positive relationship of improved quality to income equalization and government intervention attitudes. The coefficient of *legal quality* in the income equalization attitudes-estimates is +0.52 (2). The effect is strong and significant at a 1%-confidence level. In contrast, *legal quality* is not significantly related to government intervention attitudes (5). In equations (3) and (6), individual confidence in administration (*confadmin*) replaces the expert judgment on *legal quality* as explanatory variable for Welfare State attitudes. In the both regressions, we find the expected results: A higher personal confidence in administration is related positively to attitudes towards income equalization and government intervention. The relationship is always significant at a 1%-level, and thus confirms the notion that people are more willing to hand over competences to the state, if the administration is assumed to be more efficient.

The negative and highly significant coefficient of personal confidence in major companies (*confcomp*) throughout all specifications illustrates that individual assessment of Welfare State policies for income equalization and government intervention attitudes not only depends on the perceived quality of the public administration but also on the opinion on major private companies. The effect is not only statistically significant but also economically strong.

Summing up so far, our base regressions provide the evidence that improved (objective or subjectively perceived) governance quality is positively related to income equalization and government intervention preferences. Confidence in administration and distrust in major private companies jointly contribute to a more positive view of Welfare State interventions. The effect of distrust in major companies appears to be even more important for Welfare State attitude formation.

4.2 Life control, governance quality and Welfare State attitudes

In this section, we test, in particular, our main hypotheses 1: People with an internal locus of control and high self-efficacy have weaker preferences for government activities in the Welfare State area. Locus of control and self-efficacy are represented by the life control variable.

The findings of our assessment of the relationship between life control and income equalization attitudes are reported in Table 2. Throughout all model specifications, *life control* is negatively related to the preferences for income equalization at a 1%-level of significance. This resembles, for instance, the results from a recent paper by Bavetta and Navarra (2012: 48) who claim "... individuals enjoying high levels of free choice and control over life outcomes ask for lower levels of income transfers."

Table 2: Life control, governance quality and attitudes towards income equalization

dep. variable:	income equalization attitude					
	(1)	(2)	(3)	(4)	(5)	(6)
quality indicator:	no	legal	legal	confadmin	confadmin	confrel
life control	-0.092	-0.093	-0.190	-0.093	-0.100	-0.136
	[-0.071]	[-0.072]	[-0.147]	[-0.072]	[-0.078]	[-0.105]
	0.000	0.000	0.003	0.000	0.000	0.000
quality indicator		0.555	0.468	0.050	0.039	0.118
		[0.206]	[0.174]	[0.041]	[0.032]	[0.055]
		0.005	0.014	0.000	0.004	0.000
life control X quality			0.127		0.017	0.077
			[0.086]		[0.011]	[0.039]
			0.107		0.389	0.036
confcomp	-0.097	-0.100	-0.100	-0.116	-0.116	

	[-0.080]	[-0.082]	[-0.083]	[-0.096]	[-0.096]	
	0.000	0.000	0.000	0.000	0.000	
N	115349	114428	114428	114121	114121	114121
R-sq. (adj.)	0.100	0.098	0.098	0.097	0.097	0.095

Fixed effects OLS with standard errors adjusted for clustering at the country level. For each estimate, standardized beta-coefficients are reported in square brackets, followed by the cluster-robust p-value. Individual control variables: Gender, income level, education level, health status, employment status (not reported). Macro control variables: unemployment rate, GDP per capita (not reported). Constant, country and survey wave effects not reported.

Table 3: Life control, governance quality and attitudes towards government intervention

dep. variable:	government intervention attitude					
	(1)	(2)	(3)	(4)	(5)	(6)
quality indicator:	no	legal	legal	confadmin	confadmin	confrel
life control	-0.071	-0.072	-0.108	-0.072	-0.092	-0.112
	[-0.087]	[-0.087]	[-0.131]	[-0.088]	[-0.112]	[-0.136]
	0.000	0.000	0.029	0.000	0.000	0.000
quality indicator		0.121	0.088	0.043	0.014	0.095
		[0.071]	[0.052]	[0.056]	[0.018]	[0.069]
		0.222	0.442	0.000	0.188	0.000
life control X quality			0.047		0.045	0.072
			[0.050]		[0.048]	[0.058]
			0.442		0.000	0.009
confcomp	-0.081	-0.083	-0.083	-0.097	-0.097	
	[-0.106]	[-0.108]	[-0.108]	[-0.127]	[-0.127]	
	0.000	0.000	0.000	0.000	0.000	
N	106329	105454	105454	105226	105226	105226
R-sq. (adj.)	0.143	0.144	0.144	0.146	0.146	0.143

Fixed effects OLS with standard errors adjusted for clustering at the country level. For each estimate, standardized beta-coefficients are reported in square brackets, followed by the cluster-robust p-value. Individual control variables: Gender, income level, education level, health status, employment status (not reported). Macro control variables: unemployment rate, GDP per capita (not reported). Constant, country and survey wave effects not reported.

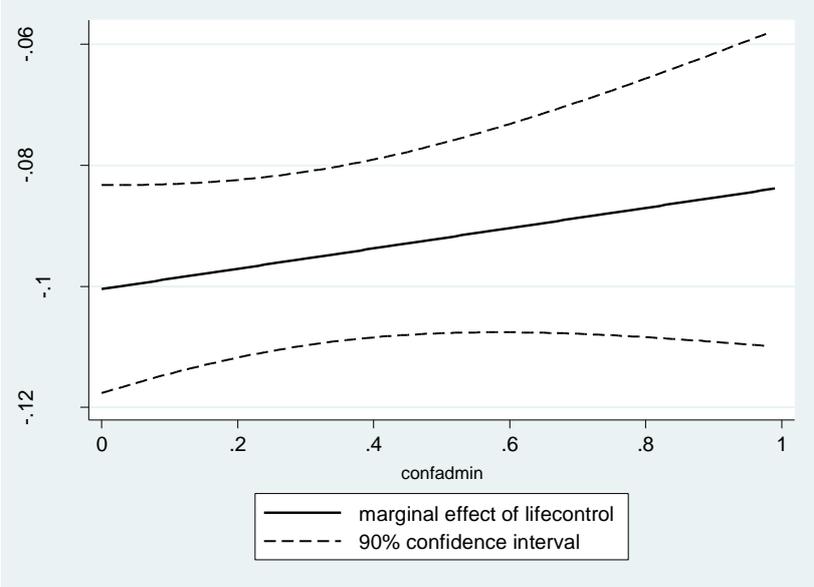
Additionally, are the effects of life control perception dependent on the quality of governance structures? In equation (3), we employ an interaction term with the EFW-measure *legal quality*. As expected, the interaction shows a positive coefficient, i.e., an improved governance quality reduces the negative impact of individual life control perception on income equalization attitudes. The effect is close to significance at a 10%-level. Again, individual measures of perceived governance quality perform similarly. While confidence in administration (*confadmin*) as 'stand alone' is positively related to income equalization preferences (equation 4), the interaction with life control is not significant at conventional levels (equation 5). Confidence in administration relative to major companies (*confrel*) once more shows a stronger effect (see also Figure 1). As the confidence in companies-variable (*confcomp*) shows a highly significant negative relation to income equalization preferences in all specifications, we can conclude that the interaction effect is mainly driven by this variable.

Table 3 depicts the results for the government intervention attitudes estimations. The baseline effect of the life control variable shows again a highly significant and strongly negative relationship to Welfare State preferences. The significance never drops below a 5%-level. The governance quality measures have the expected positive signs, but only the individual measures *confadmin* and *confrel* are statistically different from zero. In addition, the interaction terms for individual measures suggest a strong conditional effect of governance quality: perceived life control is always negatively related to government intervention attitudes, but a better-perceived governance quality appears to mitigate this negative impact, although it never disappears completely (see also Figure 2). According to equation (5), for example, the marginal effect of an increase in life control perception on government intervention attitudes is -0.092, if confidence in administration is totally absent; while the effect is still -0.047, if the respondent has highest confidence in administration.

Summing up, internal locus of control jointly with high self-efficacy is a powerful predictor of individual Welfare State attitudes. People, who believe to control their own lives, have a significantly lower support for income equalization and government intervention than people who have a strong feeling that the outcomes of their actions are beyond their control. The negative impact of life control on income equalization and government intervention attitudes is partially mitigated, if the government is perceived to be (relatively) more efficient.

Figure 1: Marginal impact of life control perception on income equalization attitudes conditional on absolute (panel A) and relative confidence in administration (panel B)

Panel A (equation 5)



Panel B (equation 6)

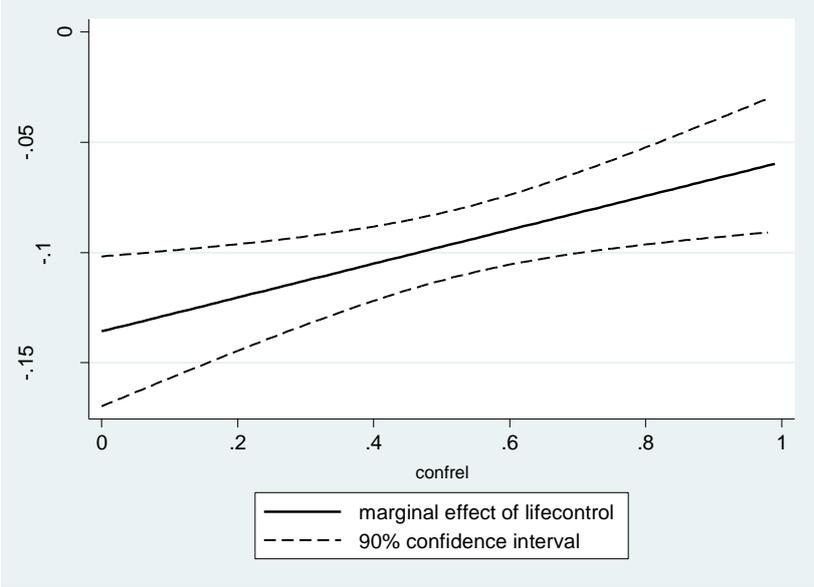
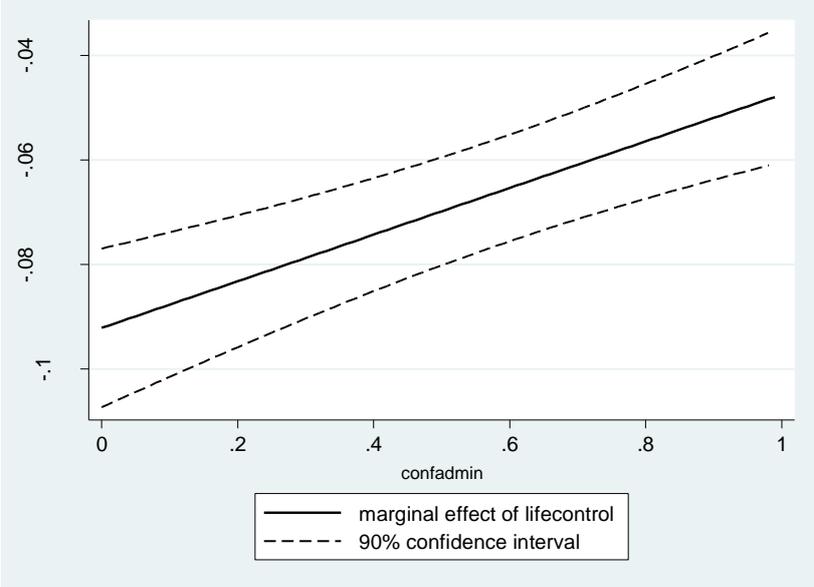
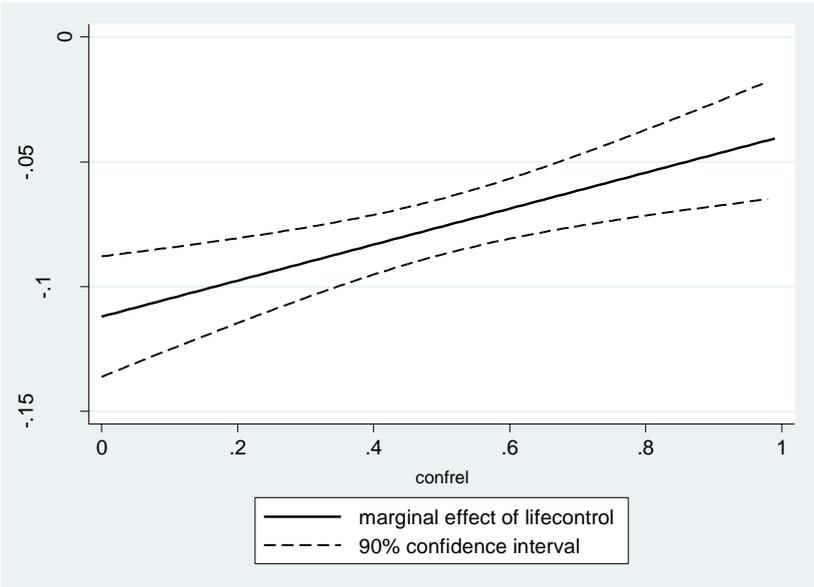


Figure 2: Marginal impact of life control perception on government intervention attitude conditional on absolute (panel A) and relative confidence in administration (panel B)

Panel A (equation 5)



Panel B (equation 6)



Conclusions

The main purpose of this paper was to propose a general informal institution determining human ways of thinking and codes of behaviour, in our case, individual support for the Welfare State. Furthermore, in accordance with North's definition of institutions (1990), we aimed to emphasize the importance of compatibility between informal institutions and the perceived quality of institutional framework. To analyse preferences, we followed a comprehensive concept of the Welfare State, measuring attitudes as regards its two basic roles, government intervention and income equalization.

Based on our survey on psychological and sociological literature, we suggest employing the concepts of locus of control and self-efficacy in order to identify the main core beliefs as the driver of Welfare State attitudes. We consider an internal locus of control and high self-efficacy in order to form a general way of thinking, which is characterized by strong features of individualism such as self-confidence, initiative and optimism. Such people with individualistic attitudes will support lower government interventions and income redistribution. On the contrary, people with an external locus control believing that outcomes of one's actions are beyond one's control will demand a more extensive model of the Welfare State.

The results of empirical analysis support our theoretical framework on control. Internal locus of control, having been expressed through the life control variable from the World Values Survey, seems to be a powerful determinant in terms of both attitudes towards government intervention and income redistribution. Life control is strongly negatively related to the attitudes for income equalization at high levels of statistical significance across all model specifications. Similarly, it shows a strongly negative relationship to the government intervention attitudes, where significance never drops below a 5%-level. Analysing conditional effects among people that do not believe in their ability to control their own lives, both as a highly perceived quality of public administration and a low confidence in major companies, enhance the preferences for redistribution and interventions.

Our findings can have important implications for public policies on the Welfare State. When we emphasize that locus of control jointly with self-efficacy form an informal institution significantly determining Welfare State attitudes, it is necessary to remind that informal institutions are supposed to be highly persistent in time (North, 1990; Jütting, 2003). Most behavioural traits are determined by a knotty mix of factors being formed mainly in childhood, which are in part genetically and socially transmitted, partially transferable between parents and children and so on (Verme, 2009). Therefore, informal institutions can hardly be changed by operating public policies. If one wants to impact on people's ways of thinking and attitudes, and thus, to affect the Welfare State demand and

acceptance of reforms, probably the most meaningful strategy is to focus on education systems and (complementarily) on social policy in a long term perspective. In a society with a higher share of independent, self-confident, active people, it is easier to introduce reforms, which require a substantial overhaul of the Welfare State that sets the focus more on personal responsibility and provision.

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Annex Table A1: Welfare State attitudes, country averages 1990s and 2000s

country	code	Income equalization attitudes		Government intervention attitudes	
		1990s	2000s	1990s	2000s
Australia	AUS	0.49	0.48	0.33	0.39
Austria	AUT	0.55	0.72	0.27	0.36
Belgium	BEL	0.47	0.48	0.35	0.40
Bulgaria	BGR	0.44	0.36	0.39	0.43
Canada	CAN	0.36	0.49	0.27	0.36
Croatia	HRV	0.60	0.63	0.36	0.41
Cyprus	CYP	.	0.54	.	0.44
Czech Republic	CZE	0.41	0.58	0.33	0.39
Denmark	DNK	0.39	0.34	0.32	0.36
Estonia	EST	0.36	0.45	0.43	0.44
Finland	FIN	0.55	0.59	0.34	0.39
France	FRA	0.56	0.54	0.36	0.42
Germany	DEU	0.44	0.63	0.32	0.39
Greece	GRC	.	0.61	.	0.44
Hungary	HUN	0.55	0.60	0.42	0.48
Iceland	ISL	0.48	0.51	0.29	0.35
Ireland	IRL	0.42	0.52	0.35	0.35
Italy	ITA	0.45	0.45	0.39	0.44
Japan	JPN	0.49	0.45	0.48	0.44
Latvia	LVA	0.35	0.38	0.41	0.44
Lithuania	LTU	0.47	0.51	0.39	0.42
Luxembourg	LUX	0.37	0.40	.	0.38
Malta	MLT	0.24	0.37	0.37	0.33
Netherlands	NLD	0.43	0.47	0.38	0.40
New Zealand	NZL	0.52	0.51	0.36	0.33
Norway	NOR	0.48	0.48	0.35	0.37
Poland	POL	0.36	0.45	0.45	0.48
Portugal	PRT	0.61	0.54	0.39	0.41
Romania	ROM	0.50	0.65	0.34	0.35
Slovakia	SVK	0.44	0.53	0.44	0.39
Slovenia	SVN	0.58	0.66	0.38	0.41
South Korea	KOR	0.45	0.39	0.40	0.50
Spain	ESP	0.54	0.53	0.45	0.49
Sweden	SWE	0.42	0.51	0.30	0.35
Switzerland	CHE	0.58	0.65	0.25	0.36
United Kingdom	GBR	0.46	0.51	0.38	0.33
United States	USA	0.44	0.43	0.26	0.33
mean		0.46	0.51	0.36	0.40

Source: Own calculations based on Word Values Survey/European Values Study (var. years)

Annex Table A2: Descriptive statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
Welfare State attitude					
income equalization attitude	165138	0.490	0.313	0	1
government intervention attitude	147708	0.382	0.197	0	1
Informal institution					
trust in people	162098	0.342	0.474	0	1
life control	162338	0.652	0.241	0	1
religiousness	164784	0.500	0.353	0	1
left ideology	135831	0.510	0.229	0	1
Perceived governance quality					
confadmin	162879	0.454	0.250	0	1
confcomp	148456	0.435	0.256	0	1
confrel	145199	0.510	0.142	0	1
Individual controls					
female	168875	0.533	0.499	0	1
age	168443	45.640	17.225	15	108
retired	165143	0.211	0.408	0	1
health status	141197	0.306	0.231	0	1
income low	168922	0.171	0.377	0	1
income high	168922	0.167	0.373	0	1
unemployed	165143	0.056	0.229	0	1
education low	168922	0.233	0.423	0	1
education high	168922	0.176	0.381	0	1
Macro controls					
legal quality	110	0.774	0.123	0.484	0.952
GDP per capita (log.)	113	10.014	0.542	8.532	11.287
unemployment rate	108	0.068	0.036	0	0.206

Source: World Values Survey/European Values Study, except for *legal quality* (Gwartney, Lawson, and Hall, 2012); *GDP per capita* (Heston, Summers, and Aten, 2012) and *unemployment rate* (Eurostat AMECO database).