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A Survey of Czech Economists: What Do They Think?

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Abstract

Traditional consensus surveys show that economists continually cannot reach an agreement on certain key policies. According to the previous research, this is mostly attributable to the differences in the political views of the economists. This thesis aims to explore additional factors, which could potentially influence the level of consensus and what the underlying causes of different views are. The author conducted a web-based survey of Czech economists and received 116 responses; the questionnaire included questions related to the economic policy of the Czech Republic and to the background of the respondents. Subsequently, a detailed analysis of the results was performed and an econometric model was constructed. The author finds that differences in views are truly the main cause of dissent among economists while other factors mostly have a negligible impact. It seems that the tendency to have liberal (=laissez faire) opinions tends to go up with income, that women tend to be less liberal than men, and that economists raised in the countryside incline to have less liberal opinions. Moreover, it was shown that graduates from the University of Economics tend to have significantly more liberal views in comparison with the graduates from other universities, ceteris paribus. However, there is still much to be explored as the general model conducted in this thesis explained approx. 45% of the variation in the tendency to have liberal opinions.

Abstrakt

Tradiční průzkumy mezi ekonomy poukazují na skutečnost, že se ekonomové ještě stále rozcházejí v určitých hospodářsko-politických doporučeních týkajících se i klíčových témat. To lze z velké části vysvětlit rozdílnými osobními hodnotami a politickými přesvědčeními ekonomů. Cílem této práce je jednak analýza dalších potenciálních faktorů, které by mohly mít na míru konsenzu vliv, jednak studium příčin rozdílných osobních hodnot a přesvědčení. Autor provedl mezi českými ekonomy dotazníkové šetření a získal 116 odpovědí; respondenti byli tázáni na jejich doporučení ohledně různých hospodářských politik a poté na detaily týkající se respondentů samotných. Následně byla provedena detailní analýza dat, včetně konstrukce ekonometrického modelu, s pomocí kterého se autor pokusil vysvětlit tendenci ekonomů mít spíše liberálnější názory, či naopak. Autor zjišťuje, že rozdíly v osobních hodnotách a politických přesvědčeních ekonomů jsou skutečně hlavním důvodem neshod a že ostatní faktory mají spíše zanedbatelný vliv. Ukazuje se, že ženy mají signifikantně vyšší tendenci preferovat zásahy do ekonomiky než muži. To samé platí pro ekonomy s nízkým příjmem, nebo pro ekonomy, kteří období života před nástupem na vysokou školu prožili na venkově. Součástí modelu bylo i porovnání škol, kde se vyučuje ekonomie a pro které byl dostatečně velký počet respondentů. Zjišťuje se, že velmi liberální názory vykazují absolventi Národohospodářské fakulty, ceteris paribus. Je zde však mnoho prostoru pro další výzkum; výše zmíněný ekonometrický model vysvětluje pouhých 45% variace proměnné, která kvantifikuje tendenci mít liberální názory.

Declaration of Authorship

1. The author hereby declares that he compiled this thesis independently, using only the listed resources and literature.

2. The author hereby declares that all the sources and literature used have been properly cited.

3. The author hereby declares that the thesis has not been used to obtain a different or the same degree.

 Prague _____   Jakub Sikora _____

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Supervisor: Petr Janský, Ph.D.

Proposed topic: A Survey of Czech Economists: What Do They Think?

Topic characteristic:
Winston Churchill allegedly complained that whenever he asked Britain´s three leading economists for advice on economic policy, he received four different opinions – two of which are from John Maynard Keynes. Unfortunately, it is known that many people doubt about the ability of economists to offer a credible policy recommendation because their opinions frequently differ. Consequently, many surveys, related to this topic, have been conducted which try to measure the level of consensus among economists. The aim of this work is to explore the situation in the Czech Republic and try to answer certain interesting questions in this field.

Firstly, findings from the surveys conducted in the past will be summarized. The author will then proceed to conduct his own survey – several hundreds of Czech economists will be contacted via email and asked to fill a questionnaire, containing approximately 20 questions concerning the economic policy. The economists will also answer certain background questions concerning their age, gender, academic career, and beliefs. After conducting the survey, overall level of consensus among the Czech economists and agreement with the current economic policy of the Czech Republic will be examined. Moreover, intertemporal comparison with the past surveys will be performed. Furthermore, the degree of consensus after controlling for certain specific characteristics will be measured. Finally, an econometric model will be constructed so as to discover factors which determine to which extent are opinions of an economist liberal or interventionist.

Research questions:
What is the overall level of consensus among Czech economists? What is the level of consensus considering individual propositions?
Do Czech economists agree with Czech policy makers?
How has the position of Czech economists changed in the past few years?
Which factors affect the ability of economists to reach an agreement and to which extent?
Which factors determine to which extent are opinions of an economist liberal or interventionist?

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   c) Definition of utilized concepts
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   b) Measuring the overall level of consensus, the level of consensus considering the individual propositions, and the disagreement with Czech policy makers; carrying out an intertemporal comparison
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Contents

1. Introduction

It is often argued that politicians do not follow suggestions of economists. This logic is frequently reversed: Firstly, the policy makers make a decision. Afterwards, they may use one of the economic theories in order to justify their policies. It is erroneous that they typically use only these principles of economics, which are suitable for advocating their own policies, the rest stay disregarded (Mac Tan, 2014).

One could assume that this is caused by wide disagreement among economists and by a considerable heterogeneity of their opinions. President Truman allegedly expressed a wish for a 'one-handed economist', after receiving so much advice in the form of 'on the one hand... but on the other hand' (Frey et al., 1984). The whole situation could be illustrated as follows: Assume that several hundreds of economists are asked to indicate whether a minimum wage increases unemployment among young and unskilled workers. The answers are as followed: Approximately 50% agree with the statement, 25% agree with provisions, and 25% disagree (this survey was truly carried out by Kearl et al. in 1992). The policy makers thus have, indeed, no motivation to follow suggestions of economists. They could just increase or decrease minimum wage and justify their decisions based on the group of economists who just happen to agree with their policy. Nevertheless, in a hypothetical situation of unanimous agreement with the statement that minimum wage laws are harmful, the impact of the economists could be much higher. It would be impossible to justify every arbitrary policy and economists could exert certain pressure on politicians via media or lobbying. If economists could improve their ability to reach a consensus, their impact on government decision-making would be more significant.

The aim of this work is to provide an inquiry into the causes of the disagreements among Czech economists. If one could identify the reasons of the discrepancy in their economic opinions, it may achieve deeper understanding of the economic profession as a whole. Two main potential sources of dissent were examined: The causes of different personal and political beliefs (which proved to be a great source of disagreements among economists in the previous research), and insufficient accumulation of economic knowledge as another conceivable factor of dissent.

Nearly a thousand of Czech economists were addressed and asked to fill in a questionnaire containing 30 questions. In the main part, a specific policy was stated for every proposition (e.g. antitrust policy). The respondents expressed an opinion on the

direction the policy should take – whether it should be more regulated, relaxed, or sustained. It was therefore feasible to assess to which extent the individuals inclined towards liberalism[1] or interventionism. Consequently, this tendency was quantified into a variable called liberalization sum. In the second part, the economists had to answer 8 control questions concerning their background, i.e. their age, gender, income, beliefs etc. This is not the first survey of its kind since the first known authors who distributed questionnaires to economists and measured the level of consensus were Kearl et al. (1979). The first economist who conducted the survey in the Czech Republic was Šťastný (2011) at the turn of 2009/2010, to whom the author is grateful for sharing the specific structure of the questionnaire.

Therefore, the analysis of the factors of dissent was conducted in the following way: In order to examine how important is accumulation of economic knowledge for the ability to reach a consensus, different subgroups of economists and their levels of consensus were compared. For a purpose of assessing which factors form the personal and political beliefs of economists, thus influencing their economic opinions, an econometric model was constructed with the liberalization sum (a proxy for tendency to have liberal opinions) as the dependent variable and background factors as the independent variables.

Moreover, due to the specific design of the survey, it was possible to infer which actual policies respondents agree with more and which they agree less with. This can offer an interesting insight for Czech politicians: What should be changed?

The thesis is organised as follows: in Section 2, there is a literature review, in Section 3, research hypotheses are formulated and theoretically derived (the position of the Czech economists is more liberal than 5 years ago, respondents with a higher level of education and an engagement in the academic world achieve a higher level of consensus, economists born in the countryside achieve, on average, lower liberalization sums). Section 4 provides more details about the concepts, and quantitative and statistical methods used in the subsequent parts. Section 5 offers technical details about the conducted survey. Section 6 encompasses general results; the most and the least consensual propositions are depicted, the policies which the respondents agree with the most or the least are discussed, and the intertemporal comparison with the survey

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[1] The meaning of the word ‚liberalism' differs across various countries. In this thesis, the term ‚liberalism' refers to an ideology that emphasizes the primacy of individual freedom and minimal government, i.e. classical liberalism (Hudelson, 1999).

conducted at the turn of 2009/2010 is performed. Section 7 deals with the proving/rejecting the stated hypotheses, which are related to the level of consensus among economists. In Section 8, factors determining the size of liberalization sums are examined. Section 9 includes concluding remarks, whereas the questionnaire itself and tables and figures not displayed in the main text can be found in the Appendix.

2. Literature review

The first authors who presented the idea to measure consensus among economists were Kearl et al. (1979) in U.S. They were followed by many academicians in different countries, for example by gentlemen Ricketts and Shoesmith (1990) in UK, Block and Walker (1988) in Canada or Frey et al. (1984) in Europe. The findings were remarkable. It was discovered that there is a greater consensus on issues in microeconomics than on issues in macroeconomics, and there is apparently more consensus on positive issues vs. normative issues. To a very intriguing conclusion came Frey et al. (1984): There is apparently a striking difference in the opinions of the economists coming from different countries. For instance, 27% of French economist disagree with the statement that tariffs reduce economic welfare. On the contrary, only 3% - 13% of economists from other European countries shared this view (Swiss, German, and Austrian economists, p. 990).

A survey which is of significant relevance for the theoretical part of this thesis, conducted by Fuchs et al. (1998), utilized quite alternative approaches. In the past surveys it was common to send to the respondents approximately 30 statements and ask them, whether they agree or disagree with them; on the contrary, Fuchs et al. queried the respondents in a more sophisticated way: The authors asked the respondents, what are their quantitative best estimates of certain economic parameters; they asked them about their 'personal and political beliefs'; and about their policy recommendations. To illustrate with a good example: The respondents were asked to indicate their estimated percent change in teen employment from a particular minimum wage increase; they were asked to express, how they prefer efficiency versus equity, individual versus social responsibility, and intensity of income redistribution (on a continuous scale ranging from 0 to 100). They were also asked, whether the minimum wage should be higher or lower. Subsequently, the authors constructed a regression model; the policy recommendations were used as the dependent variables, the estimates of the economic parameters and the 'personal and political beliefs' of the respondent were used as the independent variables of the model. The results of the regression were intriguing: The estimates of the economic parameters of the respondent had almost no impact on the policy recommendations of the queried person. On the other hand, the dependent variables were very strongly correlated with the answers to 'personal beliefs questions'. For example, even when the respondent indicated that an increase in the minimum wage causes a significant decrease in the youth employment, he or she surprisingly recommended increasing of the minimum wage, if he

preferred equity and social responsibility in the 'personal beliefs' part. In other words: Different personal values are most probably the fundamental reason, why economists disagree with each other.

The research which laid foundations for this thesis was conducted by Šťastný (2010b, 2011), who also used a different approach than his predecessors: The respondents were not asked to indicate, whether they agree with some specific statements. Instead, they were to show the course of change the policy should take. To sum up his most remarkable findings: There seems to be a significant theory-policy gap; i.e. the gap between what policy makers do and what economists think that should be done. The strongest gap concerns the proposition 'The size of the budget deficit should be' and the weakest gap concerns the proposition 'The level of the inflation target set by the central bank should be'. The author also compared Czech and American economist and it seems that Americans are more disposed towards liberalization. When considering liberalization score (a concept described in the Section 4.1), Šťastný showed that scores tend to go down with age, go up with income, and differ with gender and political party preference (it appears that women tend to be more interventionist than men and clearly, there is a large correlation between liberalization score and political party affiliation).

Certain hypotheses and methods utilised in this thesis were also inspired by findings in one of the most recent studies in this field, conducted by Gordon and Dahl (2013). The authors asked the respondents about their economic opinions, background, and about their confidence in their answers. They performed a multinomial probit model and utilized many other econometric tools (whose description goes far beyond this literature review) and discovered that wide disagreements among economists are common when the academic literature on an issue is small; that economists who got their degree at different schools show different levels of confidence (e.g. those who got their degree at The University of Chicago are the most confident); but according to their models, there are no detectable systematic differences in views across universities where economics is taught. One of the aims of this thesis is to question the last statement and show that there is indeed a link between where the economists got their degrees and their economic opinions.

3. Research hypotheses

3.1 Intertemporal comparison - expectations

One of the research questions of this thesis was to provide an intertemporal comparison with the survey conducted by Daniel Šťastný at the turn of the 2009/2010 (hereinafter referred as to 2009/2010 Survey). The main object of interest is what could have changed and what are the causes of this change.

A typical object of interest in these surveys among economists is the overall level of consensus and its development over a specific time period. However, due to its design, the only survey which can be used for intertemporal comparison is that one of Šťastný (2011). And it may be pointless to compare the level of consensus now and six years ago, this is due to following reasons:

1) The design of the survey. The respondents were asked to indicate the desired course of change which the policy should take, they should evaluate the current policy. Assume an extreme fictional example: The minimum wage was in 2013 increased to 20 000 CZK and 100% of the economists would in 2016 survey indicate that the minimum wage should be lower. This was evidently not caused by the increase in the ability of economists to reach a consensus, but by the change of the policy.

2) Six years just does not seem to be enough for accumulating sufficient scientific evidence and gathering enough experience from important economic events (e.g. ČNB decision on forex intervention, Bank of Russia currency interventions, etc.) to such extent that the ability of the economists to reach a consensus could significantly increase. This supports the fact that Kearl et al. (1992) duplicated a survey among American economists conducted in 1976 (Kearl et al., 1979), and there does not seem to be any systematic increase in the ability of economists to reach an agreement (after comparison of relative entropy, a concept which is properly described in the Section 4).

However, there is a different pattern which could be reasonable and enriching to follow: It is so called 'theory-policy gap', another concept used by Šťastný (2011).

Theory-policy gap is a gap between what the current state of the policy is and what it should be according to the economists. It could be interesting to show, which policies

economists agree more with and vice versa, compared to the results obtained six years ago.

Moreover, due to the specific design of the survey, it was possible to observe, whether the position of the economists is liberal more or less than six years ago, i.e. whether the policies should be relaxed or made more restrictive (considering the individual policies, but also the overall level). What to anticipate? One could assert that the position of the Czech economists would be more liberal than six years ago. This expectation is based on the following facts:

There are currently three leading political parties in the Czech Republic: ČSSD, ANO 2011, and KDU-ČSL. None of them describe themselves as libertarian or exclusively rightist and the most powerful political party - ČSSD - with the highest number of mandates in the Chamber of Deputies - 50 seats - could be without a dispute called a leftist one. To name some of their goals mentioned in their political program (2013) related to economics: Increase the minimum wage up to 12 000 CZK till 2018; increase the competence of the trade unions; increase the amount of investment perks offered by the government; increase the government support of the agriculture; increase the protection of the employees; increase the consumer protection; etc. (ANO, 2013; ČSSD, 2013; KDU-ČSL, 2013). These are however exactly the policies mentioned in the questionnaire (see Appendix A). Consequently, provided that the Czech Social Democratic Party is at least partially successful in implementing its program - and it is, the increase in the minimum wage the or the increase in the consumer protection can serve as a good example (Law No. 233/2015 and Law No. 378/2015, Czech Coll. Civil Code), the policies are made more interventionist, so the probability that the economists would want to interfere in the economy even more is logically lower.

3.2 The effect of education and academic rank on the level of consensus

One could argue that the causes of the disagreements among economists are not just attributable to the difference in values and political views of the economists, but also to the fact that some economists simply do not have so extensive knowledge of economics, i.e. they did not spend so much time thinking about economic issues, did not read particular key publications in economics, or just did not go through enough econometric papers which may disprove certain economic theories. This argument supports survey conducted by Gordon and Dahl (2013), who showed that the consensus

among economists considering various policies is higher conditioned on the fact that the academic literature on an issue is large. This finding implies that when the academic literature is present, researchers who went through this research would most probably achieve a higher level of consensus than those who did not go through this academic literature, or did not even hear about the most important findings from these studies.

Assume a fictional example: There is an objective unbiased econometric paper which shows that one specific policy in the Czech Republic is wrong. There are 6 economists: A, B, and C, who did not read the paper, and D, E, and F, who read the paper. The logical consequence would be that D, E, and F pronounce that the policy is wrong, therefore achieving 100% consensus. However, the opinions of the economists A, B, and C may be even arbitrary, provided that the issue is controversial and they did not go through any related research before.

Accordingly, it implies that if there are economists, who went through more objective and unbiased relevant literature in their career than certain other economists, the former group should achieve a higher level of consensus.

Based on these assumptions, the author expects that:

1) The respondents with a doctorate in economics will achieve a higher level of consensus than the other respondents

2) The professors and associate professors of economics will achieve a higher level of consensus than the other respondents.

3.3 The effect of social environment on the liberalization sum

The definition of the liberalization sum is given in the Section 4.1.

The author assumes that economists raised in the countryside achieve, on average, lower liberalization sums, and vice versa – economists raised in Prague achieve, on average, higher liberalization sums. There are two main arguments which support this hypothesis:

Firstly, Fuchs et al. (1998) showed that economic opinions of the economists are formed mostly by their personal and political beliefs (more detailed description of the findings of the model is provided in the Section 2). There are, indeed, many different factors which could potentially affect beliefs of an individual, but it is generally known that psychologists explain various personal values of the individuals by 'nature and nurture'. An indispensable part of nurture is the social environment where the individual

grew up. Finally, one would agree upon a statement that the social environment in metropolitan cities differs from the social environment in the countryside.

This argumentation shows the link why economic opinions of economists raised in the countryside could diverge from economic opinions of those raised in the large cities. However, it does not indicate anything about the direction of the difference.

This aspect offers the second argument: People from the countryside do have less liberal voting preference than people from metropolitan areas: 'The regional differences (…) turned out to be less significant than the diverging electoral results of the countryside versus urban centres, especially in the big cities' (Billaut, 1992, cited in Rey and Bachvarov, 1998, p. 348). 'The countryside has retained a conservative approach to the liberalization and the economic credo related to large scale privatization' (Rey and Bachvarov, 1998, p. 348). Rey and Bachvarov consequently assert that this effect is especially strong in the Czech Republic and that it continued also in the next elections. One could claim that these statements come from the previous millennium and that they could be therefore obsolete, however, it is elementary to show some piece of evidence that this trend holds up to the presence. Results from the parliamentary elections in 2013 could serve for this purpose: The Czech Social Democratic Party, the typical party which supports progressive taxation and a strong welfare state, got in the Czech Republic 20.45% of total votes, but in Prague only 14.09%. Same logic goes with the Communist Party of Bohemia and Moravia (14.91% total compared to 8.52% in Prague) or with the Party of Free Citizens (2.66% total compared to 3.63% in Prague, a party which could be described as a libertarian one; ČSÚ, 2013).

It has been shown that people from the metropolitan areas have different voting preference than individuals from the rest of the country – i.e. from the smaller cities and the countryside. However, what is the link with the economic opinions? Šťastný (2010b) with his method of conditional averages and also Fuchs et al. (1998) with their regression analysis showed that economists with different voting preferences do have unambiguously different economic opinions: The economists who vote more 'leftist' parties prefer interventionist approaches (Šťastný directly showed that economists who voted KSČM or ČSSD tended to have lower liberalization sums) and vice versa. Accordingly, after merging the statements in this and in the above paragraph, economists born in the countryside should tend to have lower liberalization sums and vice versa.

Empirical evidence and literature review show that the stated hypothesis should be true. However, what is the ultimate cause of this effect? First of all, the fact that

individuals from the metropolitan areas have different voting patterns than individuals from the countryside is largely caused by peer effects. In other words: If friends and relatives of a person vote for political party A, the probability that this concrete person votes for political party A is much higher; this effect is concisely described by Ed Fieldhouse (2014), who summarized findings of the British Election Study team. Consequently, after an individual forms his or her political preferences, he or she adjusts his or her economic opinions. To provide an example: One of the scenarios could be that a man is born in a small village. All his relatives and friends vote for KSČM or ČSSD. Due to the peer effect, he will also vote for KSČM or ČSSD. He will study economics. Accordingly, it is unlikely that his economic opinions will be liberal, due to the political party preference effect.

4. Definitions of utilized concepts

4.1 Liberalization sum vs. liberalization score

In propositions 2 - 22 (see Appendix A), the respondents were asked to indicate, what is the desired course of change which the policy should take. In every proposition it can be clearly decided, whether the respondent wanted the policy to be more liberal, or more interventionist. In propositions 1-18 and 20, 'Lower' is considered as the liberal answer. In propositions 19 and 21, 'Higher' is considered as the liberal answer. Liberal answer is regarded as three points, status quo stands for two points and interventionist answer corresponds to one point. Liberalization sum is therefore the sum of the points from the individual answers of a respondent. This concept was designed by the author of this thesis, the author presumes that providing results in the form of liberalization sum is easily interpretable and well-arranged.

Liberalization score, on the other hand, is a concept used by Šťastný (2010b). It is simply the mean response of a respondent (e.g. if most of the responses of an individual were predominantly liberal, his/her liberalization score could be for instance 2.6).

Liberalization score is equal to liberalization sum divided by 21.

4.2 Relative entropy

To test certain hypotheses stated in the previous section, it is reasonable to establish another concept – the relative entropy. It would be cumbersome to compare the ability of the economists to reach a consensus just by looking at the relative frequencies of the answers – one should use more sophisticated method. The relative entropy is a favorite concept used in the surveys of its kind since 1976. Garner (1962, cited in Kearl et al., 1979, p. 31) provides the following definition:

Relative entropy is an actual entropy divided by the maximum possible entropy for the number of outcomes considered, where entropy is the sum of the probability of a particular outcome times the log to the base 2 of the probability, i.e.

$$\varepsilon = \frac{\sum (p_i) log_2 (p_i)}{\sum (p_{max}) log_2 (p_{max})},$$

where p_i is the probability of a particular outcome i.

4.3 The Sign Test

In this thesis, as a decent deciding rule, statistical tests are performed in order to support or reject the theoretical hypotheses given in the Section 3. However, certain tests can be used only when particular assumptions are fulfilled. These assumptions are frequently quite strict (e.g. approximately normally distributed differences when using paired t-test, if central limit theorem is not applicable).

Nonetheless, there is one test which is distribution free and its application in this thesis was found to be useful – the sign test.

As Shier (2004) describes, the two-sample paired sign test is constructed as follows:

1. Denote observed values from the first sample as $x_1,...,x_n$, and from the second sample as $y_1,...,y_n$.
2. Compute the paired differences $x_1-y_1,...,x_n-y_n$. Drop the differences equal to zero and sort the remaining differences, accordingly. Denote the remaining set as $x_1-y_1,...,x_r-y_r$, where $r \leq n$.
3. Denote as z^+ the number of paired differences greater than zero.
4. The two-sample paired sign test is used to test the null hypothesis that the median of the differences is equal to zero. Thus, the signs of the differences should follow binomial distribution with $p=1/2$ and $n=r$, if the null is true. In case of alternative hypothesis that the median of $x´s$ is higher than the median of $y´s$, compute the p-value as the probability of observing a value of z^+ or higher on r trials when $p=1/2$, i.e.

$$\pi = P(\text{Number of positive values} \geq z^+) = Binomial\left(n=r, p=\frac{1}{2}, x \geq z^+\right).$$

5. The conduction of the survey

5.1 Who to address

One of the most problematic issues of this survey was: Who is an economist? Who to address? The consensus on rules how to decide on who is an economist in the literature is unfortunately not satisfactory. However, a decent rule of thumb is given by Roger Middleton, who asserts that an economist is someone who either identifies himself as an economist, or someone who possesses certain required economic expertise and who is identified as an economist by the others (Middleton, 1998, cited in Šťastný, 2010a).

The optimal goal would be therefore to address all the individuals, who fulfil the above mentioned criteria. This is apparently almost beyond possibility; the author would have to address not only economists from the academic world, but also individuals who consider economics as a hobby, individuals working as economists in all corporations in the Czech Republic, etc. The author therefore preferred another approach: To properly define certain groups of economists and to endeavour to draw inference for these specific groups.

The author therefore decided to address these two groups:

1) Members and ex-members of the Czech Economic Society

2) Members of all the departments of economics (and all closely related fields, such as macroeconomics, microeconomics, European economic integration, etc.), considering all the colleges and all the universities in the Czech Republic.

These two groups were chosen based on the following reasoning:

a) It is unproblematic to contact all the economists from groups defined above, thus assuring non-zero probability to involve for every participant. Situation would be more challenging in case of involving other groups of economists, whose e-mail contact could be far more problematic to find.

b) These two groups were addressed also in the 2009/2010 Survey conducted by Šťastný (2011). In order to offer a decent intertemporal comparison, it was rational to address the groups defined in the same way.

5.2 Response rate

Considering the first group (Czech Economic Society), 444 individuals were addressed, and 69 individuals responded, resulting in the response rate of 15.5%. The economists were addressed by the Czech Economic Society Board itself.

Considering the second group (academia), the economists were addressed directly by the author. However, in this case, the calculation is not so straightforward and the statistics had to be estimated. Since certain economists who work in academia are also members of the Czech Economic Society (=CSE), and CSE did not want to disclose the list of its members, a following calculation was conducted: The total number of individuals addressed by the author of this thesis was 561. Author has also the following information: In the 2009/2010 Survey, 18.80% of the addressed economists from academia (i.e. members of departments of economics) were also members of the CSE. Therefore, the estimated number of economist in the 2016 survey, who were addressed by the author, but who are not members of the CSE, is 456. Number of respondents, who are active in academia, but who are not members of the CSE is 47 (this figure was not estimated; the author knows, which answers came from the questionnaire sent out by the CSE and vice versa, and there was a question in the second questionnaire, whether the respondent is a member of the CSE). Hence, the estimated response rate of the second group is 10.31%. The difference in response rates is mostly attributable to the fact that certain economists were asked twice (by the CSE and by the author), and these were allocated only to the first group.

Putting all the numbers together, the estimated number of addressed economists is 900; the number of respondents is 116, resulting in the response rate of 12.88%.

5.3 Non-random sampling and possible biases

Clearly, the method utilized in this thesis is not a random sampling. This section describes possible issues related to the chosen sampling method and it is organized as follows: Firstly, all potential biases are discussed. Secondly, a possible solution is proposed and necessary assumptions are stated.

Potential biases thus are:

Overcoverage. It is conceivable that certain individuals addressed do not fully fulfil the criteria given in the Section 5.1 – some members of the departments of economics in the Czech Republic (or the departments of macroeconomics,

microeconomics, etc.) are not economists, but they specialise in a related field (e.g. statistics, econometrics). However, there should not be nearly any bias caused by this factor – firstly, this group is rather small. Secondly, these concrete individuals principally did not fill out the questionnaire. This illustrates the fact that the author received several emails with the content 'Thank you for the possibility to participate in your survey, but I do not consider myself an economist'.

Undercoverage. The author addressed members of the CSE and economists active in academia. The results should not be generalized to all economists in the Czech Republic. It is conceivable that a different sample would yield significantly different results – employees of the Czech National Bank have probably different views regarding the policy of the CNB, compared to other economists, employees of the Ministry of Finance would probably demonstrate different opinions regarding the fiscal policy, etc. Thus, if only members of the CSE and economists active in academia are considered, the author estimates that almost every individual from the defined population had non-zero probability to participate – CSE sent the questionnaire to every member and the author asserts that he contacted nearly all economists active in academia (it was not possible to obtain respective email addresses only in exceptional cases, almost all the departments disclose all the necessary contacts online).

Non-response bias. All the surveys with less than full response potentially suffer from non-response bias. However, under certain assumptions, models based on surveys can still produce unbiased and consistent estimators - if the probability to participate in the survey is independent of the variables of interest (i.e. dependent variables; Wooldridge, 2012, p. 353). However, this assumption may seem to be too strong. There are, indeed, factors which are correlated with the probability to participate and also with the variables of interest in this thesis, for instance, it was shown that women tend to have response rates higher than men (Curtin et al., 2000), and as it is displayed in the Section 8, women tend to have lower liberalization sums than men. The situation is similar with the CSE members and non-members. Nevertheless, there still exists a solution – simply the construction of OLS model. Then, in order to produce unbiased and consistent estimators, it is only necessary that the probability to participate is independent of the error term u (Wooldridge, 2012, p. 644). Fortunately, this is more realistic case. The author has a lot of information available about the respondents, thus he could include a lot of variables which are potentially dependent on the probability to respond and on the liberalization sum (age, gender, income, CSE membership, academic rank, etc.).

Hence, assuming no overcoverage (non-economists did not respond), no undercoverage (everyone from the population of interest had non-zero probability to participate), supposing that the probability to participate is independent of the error term u in the regression model, and presuming that the remaining multiple linear regression assumptions of OLS hold (linearity in parameters, no perfect collinearity, zero conditional mean), then OLS estimates may be unbiased and consistent.

To sum up: As it was shown, the first three assumptions in the paragraph above may not completely hold. All the results from the OLS models in this thesis should be therefore taken with caution (and all the results from other statistical tests, where OLS is not utilized, even with greater caution). But, due to the fact that these assumptions are not far from the reality, it is feasible to theoretically explain all the results in the empirical part of this thesis, and the results mostly correspond to the outcomes of the previous research, the author asserts that the conclusions drawn in this thesis could be considered as reliable.

There are many advanced procedures which could be performed so as to discover and fix sample selection bias (well-arranged overview is given in Cuddeback et al., 2004). However, they mostly assume that the researcher has particular data available likewise about those who refused to participate in the research, in order to construct a model involving the probability of the participation. This is apparently not the case; the author does not possess any additional information about the non-respondents.

5.4 Sample selection – empirical tests

It may be useful to compare the two above mentioned groups: Members of the CSE and members of academia. It can offer an interesting insight, whether economists from one of the mentioned groups tend to have distinct opinions. The analysis also mitigates objections such as why the author merged these two groups together; what if the selection of only one group would consequent in different results.

There are three main variables, which are of interest in this thesis. These are level of consensus (relative entropy was chosen as the main proxy), mean responses for every proposition (these are always computed for a group of respondents), and liberalization sum (which is always computed for an individual), these concepts are described in the Section 4. Thus, the empirical tests below are run for the level of consensus and the mean responses of individual propositions.

The values of relative entropies for propositions 2-22 were compared (see Table B.1 in the Appendix, 'CSE vs. academia comparison'). Usage of paired t-test would be misleading, Shapiro-Wilk test for normality shows very low p-value (0.03) and rejects the hypothesis that the differences have normal distribution at the 0.05 significance level. Histogram of the differences does not seem to be even approximately distributed. Nevertheless, the average difference between the relative entropies is equal to 0.004. To offer more convenient deciding rule, non-parametric inferential statistical methods were utilized. Sign test fails to reject the hypothesis that the median difference is equal to zero at the 0.05 significance level (p-value 0.38, two-tail testing). Thus, there does not seem to be any systematic difference in the ability to reach a consensus, considering the two aforementioned groups.

On the contrary, the situation is different with the mean responses of the propositions (answer with the label '3' indicates that the policy should be relaxed, with the label '2' signifies status quo, with the label '1' denotes that the policy should be restricted or it should be more interventionist. To provide an illustration, a mean response of value 2.61 on proposition 21 suggests that the majority of the economists think that the extent to which the university students share the cost of university education should be higher). Mean values of the responses seem to have slightly different distributions - the mean difference between the propositions is equal to 0.09 (economists from the CSE seem to be less liberal than their colleagues from academia). Sign test rejects the hypothesis that the median is equal to zero at the 0.05 level of significance (p-value 0.03, two tail testing). Wilcoxon matched-pairs signed-ranks test rejects the hypothesis of identical distributions at the 0.05 level of significance (p-value 0.00).

To sum up, both groups seem to yield almost undistinguishable results for the values of relative entropies for every proposition. Nevertheless, they appear to yield different results, considering the mean values of the responses – members of the CSE seem to be less liberal than their counterparts from academia. This may be an issue for the interpretation of the results, because the response rates of these two groups were quite different (see Section 5.2). So as to offer a solution, an econometric model is constructed, which controls for the variation caused by the membership in one of the aforementioned groups (see Section 8).

6. General results

This section is organised as follows: In the first part, the relative frequencies of the answers to all the questions are displayed. All the propositions are ordered according to the level of consensus (i.e. relative entropy index). In the second part, the potential theory-policy gap is discussed. Finally, the hypothesis that the position of the Czech economists is more liberal than six years ago is tested.

6.1 Propositions ordered according to the level of consensus

As one can see in the Table 6.1, the most consensual issues are following: Proposition which concerns the size of the budget deficit (87.9% of economists who responded believe that it should be lower); tuition fees (69.8% of the respondents assert that the extent to which the university students share the cost of university education should be higher); government expenditure and tax burden (69.0% of the respondents claim that the overall tax burden and the size of government expenditures should be lower).

Table 6.1 – Relative frequencies of responses and relative entropies

Proposition	n	Higher	Status Quo	Lower	R. Entropy
5. BUDGET DEFICIT	116	0.0%	12.1%	87.9%	0.34
21. TUITION FEES	116	69.8%	24.1%	6.0%	0.69
6. GOV. EXPEND.	116	6.0%	25.0%	69.0%	0.70
8. TAX BURDEN	116	6.0%	25.0%	69.0%	0.70
10. INFL. TARGET	115	11.3%	65.2%	23.5%	0.79
17. HUMAN ORG.	116	52.6%	41.4%	6.0%	0.79
14. EMPLOYEE PROT.	116	6.0%	44.0%	50.0%	0.80
9. MONEY SUPPLY	114	14.0%	64.9%	21.1%	0.80
7. INCOME TAX	114	8.8%	35.1%	56.1%	0.82
15. LAB. UNION POW.	116	10.3%	40.5%	49.1%	0.86
2. TRADE BARRIERS	116	11.2%	44.0%	44.8%	0.88
19. MAX. RENT	116	37.1%	49.1%	13.8%	0.90
13. ANTI-TRUST POL.	116	22.4%	56.0%	21.6%	0.90
20. AGRICUL. SUPP.	116	19.0%	27.6%	53.4%	0.92
12. CONS. PROT.	116	38.8%	45.7%	15.5%	0.92
22. INVEST. PERKS	116	17.2%	34.5%	48.3%	0.93
16. ILLIC. DRUGS	116	51.7%	25.9%	22.4%	0.93
11. ENVIR. PROT.	116	41.4%	41.4%	17.2%	0.94
4. TRADE DEFICIT	116	45.7%	34.5%	19.8%	0.95
18. MINIMUM WAGE	116	25.9%	45.7%	28.4%	0.97
3. ANTIDUMPING	116	27.6%	42.2%	30.2%	0.98

Source: Author´s calculations based on the survey conducted in 2016.

The least consensual issues are following: Proposition which concerns antidumping and other trade-political proceedings; the size of the minimum wage; and the extent to which policy-makers pay attention to the potential balance of trade deficit.

For these studies is typical that the authors consequently evaluate the overall level of consensus among the respondents – they denote certain threshold for 'a consensual issue' (e.g. for all propositions with relative entropy lower than X), and afterwards, they assert that the level of consensus is not so poor, as it is widely prejudiced (because many propositions had relative entropy lower than X). The author of this thesis does not regard this approach as appropriate. First of all, the measured ability of the economists to reach a consensus is greatly dependent on the selection of questions. One could then create a set of questions which are unproblematic to answer and consequently assert that the economists can reach a solid agreement (or vice versa).

Secondly, the fact that there is a higher level of consensus among economists on certain issues does not necessarily indicate that studying economics and being an economist supports reaching a higher level of consensus. There was a survey in 1996 in U.S. which was administered both to a set of economists and a set of ordinary people. It was found that on one-third of the questions, the standard deviation of the economists´ responses was actually greater than that of ordinary people. The questions where the economists reached a higher consensus were rather technical, i.e. related to the terms and concepts used in economics (Bryan, 2001).

The author therefore decided that it would not be proper to judge the ability of the economists to reach a consensus just according to the results of the current survey.

6.2 Size of the theory-policy gap

Theory-policy gap is a gap between what economists think that the policy should be and what the actual state of the policy is. An analysis of the potential theory-policy gap from the results of the survey could actually offer an interesting insight: Which policies respondents do agree with and which they would like to change?

There are in fact more possible ways, how to measure the theory-policy gap from the results of the survey. One would be to take the absolute difference between the mean response and the value 2.0 for every proposition. This approach has, however, one shortcoming: If 50% of economists indicated that the policy should be made more restrictive and 50% vice versa, the absolute difference of the mean response and the value 2.0 would be zero – but the size of the theory-policy gap is in this case evident. Another

approach would be to measure the theory-policy gap by the criterion how many economists indicated that the policy should be unchanged. This method however does not take into consideration anything about the structure of other possible answers. The author therefore decided to create a composite rank – 50% weight is given to the first criterion, and 50% is given to the second one.

Table 6.2 – Questions ordered by the size of the theory-policy gap

Proposition	n	Mean	Abs. Diff.	Rank Crit. 1.	Status Quo %	Rank Crit. 2.	Rank Comp.
5. BUDGET DEFICIT	116	2.88	0.88	1	12.1%	1	1
21. TUITION FEES	116	2.64	0.64	2	24.1%	2	2
6. GOV. EXPEND.	116	2.63	0.63	3	25.0%	3	3
8. TAX BURDEN	116	2.63	0.63	3	25.0%	3	3
7. INCOME TAX	114	2.47	0.47	5	35.1%	9	5
20. AGRICUL. SUPP.	116	2.34	0.34	9	27.6%	6	6
16. ILLIC. DRUGS	116	1.71	0.29	12	25.9%	5	7
17. HUMAN ORG.	116	1.53	0.47	6	41.4%	11	7
22. INVEST. PERKS	116	2.31	0.31	11	34.5%	7	9
15. LAB. UNION POW.	116	2.39	0.39	8	40.5%	10	9
4. TRADE DEFICIT	116	1.74	0.26	13	34.5%	7	11
14. EMPLOYEE PROT.	116	2.44	0.44	7	44.0%	14	12
2. TRADE BARRIERS	116	2.34	0.34	10	44.0%	14	13
11. ENVIR. PROT.	116	1.76	0.24	14	41.4%	11	14
12. CONS. PROT.	116	1.77	0.23	15	45.7%	16	15
3. ANTIDUMPING	116	2.03	0.03	19	42.2%	13	16
19. MAX. RENT	116	2.23	0.23	15	49.1%	18	17
18. MINIMUM WAGE	116	2.03	0.03	19	45.7%	16	18
9. MONEY SUPPLY	114	2.07	0.07	18	64.9%	20	19
10. INFL. TARGET	115	2.12	0.12	17	65.2%	21	19
13. ANTI-TRUST POL.	116	1.99	0.01	21	56.0%	19	21

Source: Author´s calculations based on the survey conducted in 2016.

The components of the Table 6.2 are as follows: In the third column, the mean response is given. In the fourth column, the absolute difference between the mean response and the value 2.0 is displayed. In the sixth column, the share of economists who claimed that the policy should be left unchanged is presented. In the last column, the composite rank constructed according to the comments above is shown.

The policies with the most significant theory-policy gap (i.e. the policies which the economist disagree with the most) are equivalent to those in the previous section; they concern budget deficit, overall tax burden, tuition fees and government expenditures.

However, the situation is different in the opposite case. The respondents seem to agree with the extent to which the anti-trust authority interferes with the economy. Moreover, they seem to go along with the monetary policy of the Czech Republic: The

majority of respondents indicated that the rate of the money supply and the level of inflation target should be left unchanged.

6.3 Intertemporal comparison

Table 6.3 compares the results from the survey conducted at the turn of 2009/2010 by Daniel Šťastný and from the current survey. The comparison should be taken with carefulness; although the author of this thesis addressed the groups of economists defined in the same way as Šťastný did (i.e. CSE and academia members), most probably only certain respondents responded both in the 2009/2010 Survey and in the 2016 Survey.

Table 6.3: Intertemporal comparison – 2009/2010 Survey vs. 2016 Survey

Proposition	n (16)	n (09/10)	Mean 16	Mean 09/10	Diff.
18. MINIMUM WAGE	116	180	2.03	2.36	-0.33
19. MAX. RENT	116	178	2.23	2.51	-0.28
15. LAB. UNION POW.	116	181	2.39	2.58	-0.19
14. EMPLOYEE PROT.	116	179	2.44	2.59	-0.15
17. HUMAN ORG.	116	178	1.53	1.67	-0.14
3. ANTIDUMPING	116	179	2.03	2.15	-0.13
4. TRADE DEFICIT	116	180	1.74	1.86	-0.12
20. AGRICUL. SUPP.	116	182	2.34	2.44	-0.09
11. ENVIR. PROT.	116	176	1.76	1.84	-0.09
21. TUITION FEES	116	182	2.64	2.72	-0.09
8. TAX BURDEN	116	180	2.63	2.68	-0.05
2. TRADE BARRIERS	116	181	2.34	2.37	-0.04
16. ILLIC. DRUGS	116	179	1.71	1.73	-0.02
22. INVEST. PERKS	116	181	2.31	2.32	-0.01
9. MONEY SUPPLY	114	177	2.07	2.05	0.02
7. INCOME TAX	114	178	2.47	2.42	0.05
6. GOV. EXPEND.	116	178	2.63	2.58	0.05
13. ANTI-TRUST POL.	116	180	1.99	1.94	0.05
12. CONS. PROT.	116	179	1.77	1.70	0.06
10. INFL. TARGET	115	178	2.12	2.05	0.08
5. BUDGET DEFICIT	116	179	2.88	2.75	0.13

Sources: 1. Author´s calculations based on the survey conducted in 2016. 2. Šťastný (2011) based on the survey conducted at the turn of 2009/2010.

First of all, considering all the propositions, there does not seem to be any statistically significant systematic difference. It is not possible to claim that the position of the economists is more liberal than six years ago. Sign test fails to reject the hypothesis of identical medians at the 0.05 significance level (p-value 0.181, two-tailed testing). The data actually seem to slightly contradict the research hypothesis formulated in the Section

3.1. The position of the Czech economists appears to be somewhat less liberal than six years ago, the average difference is equal to 0.06.

Secondly, there seem to be certain significant differences, considering the individual propositions. Two-sample t-test (equal variance variant) was constructed; all the propositions which are significant at the 0.05 level (two-tailed variant) are coloured in grey.

Although the findings contradict the expectations given in the Section 3.1, the author endeavoured to offer a theoretical explanation of the results observed:

Firstly, it may be related to The 2008-2009 Global Financial Crisis. It is logical that the recommendations of the economists during the economic growth phase (2016) may differ compared to the recommendations offered during the times just after the global recession. This may at least partly explain the differences considering the propositions related to the minimum wage law, labour union power, employee protection and budget deficit (certain economists would argue that in order to get faster from the recession, one should relax the employment policy, but do not pay excessive attention to the budget deficit during the recession period).

Considering the maximum rent proposition, there may be another factor causing this difference. In 2011 and 2012 (just after the 2009/2010 Survey), there was a considerable rent deregulation process in the Czech Republic. The landlords had the possibility to increase rent several times without the consent of the tenants (Keřková, 2013). It is then logical that after this process, the position of the economists on this issue is not so liberal as six years ago.

7. Factors determining the level of consensus

In this Section, the factors determining the level of consensus are examined. In the first part, the hypothesis that professors and associate professors reach higher levels of consensus than others is tested. In the second part, the hypothesis that the economists with a doctorate achieve higher levels of consensus than others is tested. The last part encompasses summary and a possible explanation of the observed data.

7.1 Professors and associate professors vs. others

The author used the relative entropy as a gauge to measure the level of consensus. However, so as to not to rely on a single methodology, also other techniques were utilized. One could assess the ability to reach a consensus also by the relative frequency of the most repeated response, or vice versa.

The Table 7.1 is constructed as follows: In the second and in the third column, the relative frequencies of the most repeated responses are compared. By Prof. is meant the group of professors and associate professors, by Xprof. the rest of the economists. In the third and in the fourth column, the relative frequencies of the least frequented responses are compared. In the fifth and in the sixth column, relative entropies of the defined groups are compared. Last column displays the difference between the computed entropies for every proposition. Last row shows the averages of the values in the columns above. The propositions are sorted according to the difference in relative entropies. The issues where the professors can reach a higher level of consensus than the rest are therefore above, and vice versa. The number of professors and associate professors who responded is equal to 25 for every question; the number of respondents who belong to the second group varies from 81 to 83, depending on the proposition.

All the methods used to measure the level of consensus to some extent indicate that the professors and associate professors (further in the text as 'professors') achieve a higher level of consensus. Nevertheless, the differences are not significant enough.

Comparing the relative entropies, professors have on average relative entropies lower by 0.04. On 12 from 21 propositions, they achieve lower relative entropy than the second group does. This is not however any proof of the hypothesis. Sign test fails to reject the hypothesis of identical medians at the 0.05 level (p-value 0.33, one-tailed testing).

Table 7.1 – Measuring the ability to reach a consensus – professors vs. others

Proposition	Prof. Max Mode	Xprof. Max Mode	Prof. Min Mode	Xprof. Min Mode	Prof. Entr.	Xprof. Entr.	Diff. Entr.
8. TAX BURDEN	0.8	0.65	0	0.07	0.46	0.75	0.30
21. TUITION FEES	0.8	0.66	0	0.07	0.46	0.74	0.29
15. LAB. UNION POW.	0.72	0.46	0.04	0.12	0.64	0.89	0.24
14. EMPLOYEE PROT.	0.56	0.47	0	0.07	0.62	0.82	0.20
22. INVEST. PERKS	0.52	0.47	0.08	0.19	0.83	0.95	0.12
10. INFL. TARGET	0.72	0.65	0.08	0.11	0.69	0.79	0.10
19. MAX. RENT	0.52	0.49	0.08	0.13	0.83	0.90	0.07
20. AGRICUL. SUPP.	0.6	0.52	0.16	0.18	0.86	0.92	0.06
2. TRADE BARRIERS	0.56	0.47	0.08	0.11	0.81	0.87	0.06
6. GOV. EXPEND.	0.68	0.67	0.04	0.06	0.68	0.72	0.04
17. HUMAN ORG.	0.56	0.57	0.04	0.05	0.75	0.76	0.01
3. ANTIDUMPING	0.44	0.43	0.24	0.27	0.97	0.98	0.01
4. TRADE DEFICIT	0.52	0.49	0.24	0.18	0.93	0.93	0.00
18. MINIMUM WAGE	0.4	0.47	0.28	0.27	0.99	0.96	-0.03
12. CONS. PROT.	0.48	0.45	0.2	0.14	0.95	0.92	-0.03
9. MONEY SUPPLY	0.64	0.67	0.16	0.12	0.82	0.78	-0.04
11. ENVIR. PROT.	0.4	0.43	0.24	0.14	0.98	0.92	-0.06
16. ILLIC. DRUGS	0.4	0.55	0.28	0.19	0.99	0.90	-0.09
7. INCOME TAX	0.44	0.60	0.12	0.07	0.89	0.78	-0.10
13. ANTI-TRUST POL.	0.44	0.61	0.24	0.16	0.97	0.84	-0.13
5. BUDGET DEFICIT	0.76	0.90	0	0	0.50	0.29	-0.21
AVERAGES	**0.57**	**0.56**	**0.12**	**0.13**	**0.79**	**0.83**	**0.04**

Source: Author´s calculations based on the survey conducted in 2016.

Comparing the most frequent responses, professors have on average these responses higher by 0.01. On 13 from 21 propositions, the relative frequency of the most repeated response is higher than in the second group. Sign test fails to reject the hypothesis of identical medians at the 0.05 level (p-value 0.19, one-tailed testing).

Assessing the method of least frequent responses, professors have on average these responses lower by 0.01. On 12 from 21 propositions, the relative frequency of the least frequent response is lower than in the second group (and on one the size is equal). Sign test fails to reject the hypothesis of identical medians at the 0.05 level (p-value 0.25, one-tailed testing).

It can be also interesting to infer, what do actually professors of economics think, and which issues they achieved a higher level of consensus on (i.e. after devoting a substantial part of their life to economics, on which propositions they can use their gained knowledge, thus reaching a higher level of consensus than the other economists?)

It seems that the professors are reasonably sure about the fact that: The overall tax burden should be lower, the tuition fees should be established, the power of labour unions should be lower, and the difficulty to lay off employees should be lower.

7.2 Economists with doctorate degree vs. others

The similar analysis as in the Section 7.1 was conducted to compare respondents who obtained doctorate degree and who did not. The concept of relative entropy and the method of the least frequent response do indicate that economists with doctorate degree achieve a *lower* level of consensus, except that not significantly. However, the method of the most frequent response shows that the economists with doctorate degree achieve a lower level of consensus - significantly. Sign test rejects the hypothesis of identical medians at the 0.05 level of significance (p-value 0.0378, one-tailed testing) – on 15 from 21 propositions, the relative frequency of the most repeated response considering the economists with a doctorate is lower, compared with the other economists.

Table 7.2: Measuring the ability to reach a consensus – economists with doctorate degree vs. others

Propositions	Doc. Mode Max	Xdoc. Mode Max	Doc. Mode Min	Xdoc. Mode Min	Doc. Entr	Xdoc. Entr.	Entr. Diff.
22. INVEST. PERKS	0.54	0.43	0.09	0.27	0.84	0.98	0.14
21. TUITION FEES	0.70	0.62	0.04	0.11	0.67	0.81	0.14
11. ENVIR. PROT.	0.46	0.41	0.15	0.24	0.92	0.98	0.06
14. EMPLOYEE PROT.	0.52	0.57	0.04	0.08	0.77	0.81	0.05
18. MINIMUM WAGE	0.48	0.38	0.22	0.27	0.95	0.99	0.04
17. HUMAN ORG.	0.49	0.59	0.04	0.08	0.77	0.80	0.03
19. MAX. RENT	0.51	0.46	0.12	0.14	0.88	0.90	0.03
20. AGRICUL. SUPP.	0.54	0.54	0.16	0.22	0.90	0.92	0.01
3. ANTIDUMPING	0.43	0.46	0.25	0.24	0.98	0.97	-0.01
4. TRADE DEFICIT	0.40	0.46	0.21	0.19	0.97	0.95	-0.02
12. CONS. PROT.	0.48	0.46	0.16	0.14	0.93	0.90	-0.02
15. LAB. UNION POW.	0.45	0.51	0.12	0.11	0.89	0.87	-0.02
10. INFL. TARGET	0.64	0.67	0.12	0.11	0.80	0.77	-0.03
9. MONEY SUPPLY	0.63	0.68	0.14	0.16	0.82	0.78	-0.04
13. ANTI-TRUST POL.	0.55	0.62	0.22	0.14	0.91	0.83	-0.08
2. TRADE BARRIERS	0.48	0.51	0.12	0.05	0.89	0.79	-0.10
6. GOV. EXPEND.	0.64	0.70	0.09	0.03	0.78	0.64	-0.14
8. TAX BURDEN	0.66	0.73	0.09	0.03	0.76	0.61	-0.15
16. ILLIC. DRUGS	0.42	0.68	0.25	0.14	0.98	0.77	-0.21
7. INCOME TAX	0.48	0.67	0.14	0.03	0.90	0.67	-0.24
5. BUDGET DEFICIT	0.82	0.95	0.00	0.00	0.43	0.19	-0.24
AVERAGES	**0.54**	**0.58**	**0.13**	**0.13**	**0.84**	**0.81**	**-0.04**

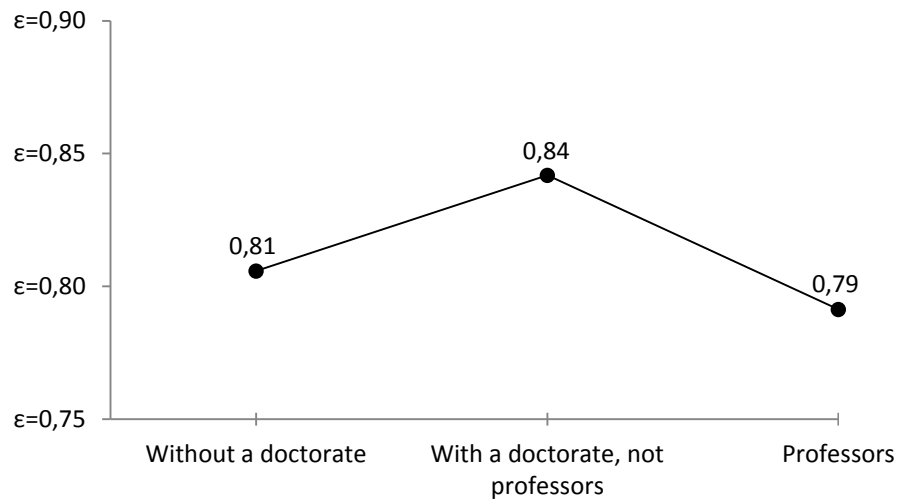*Source:* Author´s calculations based on the survey conducted in 2016.

Computations are shown in the Table 7.2, which is constructed in the same way as the Table 7.1 in the previous Section. The number of respondents with a doctorate is equal to 67, the number of respondents without a doctorate is equal to 37 (these who declined to answer were omitted from the analysis).

7.3 Factors determining the level of consensus – concluding remarks

It seems that professors achieve a slightly higher level of consensus than the other respondents (but only at very high levels of significance, e.g. 0.20, considering the most frequent response method) – this may support the hypothesis stated in the Section 3.2. On the contrary, economists with a doctorate achieve slightly lower levels of consensus than the other respondents (at the 0.05 level of significance, considering the most frequent response method) – this contradicts the research hypothesis given in the Section 3.2. The author therefore computed the relative entropies for the group of economists who have doctorate but who are not professors and he found that the high values of relative entropies persist.

The possible theoretical explanation of the data could be as follows: After graduation, there is no reason why the opinions of the economists should substantially diverge. Every economist obtained knowledge of the basic concepts in economics, e.g. the deadweight loss; that the excessive taxation has adverse effects on the economy, that the excessive trade barriers have unfavourable effects on the consumers, etc. Thus, there should be a similar pattern in their responses. Nevertheless, during their doctorate studies, they may specialize in certain field or they may focus on some school of economic thought, resulting in the decreased ability to reach a consensus among their colleagues. Finally, after achieving the academic rank of professor or associate professor, their deep knowledge of economics helps them not to be influenced just by one school of economic thought, but it secures that their opinions are based on a synthesis of numerous studies, resulting in the better perception of which economic effects are truly important, causing an increased ability to reach a consensus among each other.

The average relative entropies (considering the 21 propositions) for the aforementioned groups are displayed in the Figure 7.1. The effect of professorship on the ability to reach a consensus should be taken with caution – as it is conceivable from the p-values of the conducted statistical tests presented above, the differences could be generated only by chance.

Figure 7.1 – Average relative entropies

Source: Author´s calculations based on the survey conducted in 2016.

8. Factors determining the liberalization sum

In this section, various factors which could potentially influence the liberalization sum are examined (definition of the liberalization sum is given in the Section 4.1). Certain factors were analyzed already in the previous research (age, income, gender). The author intends to replicate the tests and check, whether he obtained similar results. Particular factors are studied for the first time – e.g. where the economists were raised (the author found sufficient support in the literature to theoretically derive, why economists who were raised in the countryside should have lower liberalization sums than other economists; more in the Section 3.3), or whether religion has any impact on the liberalization sums (author did not find sufficient support in the literature).

This section is organised as follows: In the first part, the conditional averages are depicted. In order to control for the interdependencies between the control variables and to mitigate certain issues with sampling, the OLS regression is performed in the second part.

8.1 Conditional averages

The sample mean of the liberalization sum of all the respondents is equal to 46.0.

As it is shown in the Table 8.1, women tend to have lower liberalization sums than men. The interpretation is following: The sample conditional averages of men and women are equal 47.3 and 42.6, respectively; then on average, on almost 5 from 21 propositions, the position of men was more liberal by one level, i.e. the respondent answered 5 times 'lower' instead of 'unchanged' for propositions where 'lower' represents more liberal answer (or different corresponding combinations). This is in fact a substantial difference.

Šťastný (2010b) obtained similar results: The liberalization sum sample average for men at the turn of 2009/2010 was equal to 48.3, for women 44.5.

Table 8.1 – Average liberalization sum according to gender

Category		Average liberalization sum
Men	n=79	47.3
Women	n=30	42.6

Source: Author´s calculations based on the survey conducted in 2016.

As for age, there does not seem to by any pattern which would indicate that the liberalization sum is correlated with this factor. This may contrast with the findings of Šťastný (2011b), who showed that the liberalization score (i.e. liberalization sum divided by 21) tends to go down with age. However, this could be caused by the fact that the

number of observations for some categories is very small, thus the probability to detect certain effects is lower.

Table 8.2 – Average liberalization sum according to age

Category		Average liberalization sum
26 – 35 years	n=41	46.9
36 – 45 years	n=31	46.7
46 – 55 years	n=13	40.7
56 – 65 years	n=14	45.1
66 and more years	n=8	46.1

Source: Author´s calculations based on the survey conducted in 2016.

A factor which is apparently of highest relevance for the liberalization sum is income. As it is depicted in the Table 8.3, income has a truly profound effect. Šťastný (2011b) obtained analogous results: 43.7, 44.1, 48.8, 49.6, for the groups with annual income less than 250 000 CZK, 250 000 – 500 000 CZK, 500 000 – 750 000 CZK, more than 750 000 CZK, n=18, 4, 38, 48, respectively.

Table 8.3 – Average liberalization sum according to annual income

Category		Average liberalization sum
Less than 250 000 CZK	n=9	38.4
250 000 – 500 000 CZK	n=31	43.8
500 000 – 750 000 CZK	n=17	48.2
More than 750 000 CZK	n=35	49.0

Source: Author´s calculations based on the survey conducted in 2016.

Considering the factors which were not examined in any similar research before:

As it is displayed in the Table 8.4, religion seems to have no impact on the liberalization sum.

Table 8.4 – Average liberalization sum according to 'tendency to be religious'

Category		Average liberalization sum
Atheists	n=41	46.5
Agnostics who tend towards atheism	n=8	44.9
Agnostics who tend towards theism	n=18	46.9
Christians	n=20	44.2

Source: Author´s calculations based on the survey conducted in 2016.

As it is shown in the Table 8.5, the factor which seems to have a large impact is where the economist grew up (considering the stage of life before going to the university, see Appendix A, proposition 29). Only the respondents who were raised in the Czech Republic were taken into account; label 'Countryside' denotes municipality with maximally 10 000 inhabitants, 'Small city' signifies a town with 10 000 – 90 000

inhabitants, 'Large city' represents a city with more than 90 000 inhabitants (except for Prague).

Table 8.5 – Average liberalization sum according to environment where the individual was raised

Category		Average liberalization sum
Countryside	n=16	41.8
Small city	n=30	47.0
Large city	n=31	45.9
Prague	n=26	48.1

Source: Author´s calculations based on the survey conducted in 2016.

The data seem to support the hypothesis given in the Section 3.3. Although there appears to be only a minor difference between the respondents who were raised in Prague and those who where raised in smaller cities or towns, there seems to be a great difference, considering the respondents who were raised in the countryside. As it was already mentioned, this could be attributable to the fact that the political preferences in the countryside substantially differ from the political preferences in larger cities.

8.2 Regression analysis

This section is divided in the two subsections: In the first part, the OLS regression is performed and the results are described. In the second part, the Gauss-Markov assumptions are discussed.

8.2.1 Regression results

Two different regression models were constructed, with the liberalization sum as the dependent variable. In the first model (see Table 8.7), all the available variables with some potential effect were added in the regression, including the faculties, where the economists obtained their highest degree (dummies were included for faculties with the number of observations greater than 10). In the second model (see Table 8.8), the variables were chosen in a way to achieve the highest adjusted R-squared.

The reference categories were chosen according to the following criteiron: Categories whose mean is at one of the ends (the highest liberalization sum possible).

Certain groups were merged in order to simplify the model and increase the number of observations for various groups. Description of the variables is given in the Table 8.6:

Table 8.6: Description of the variables

Name of the variable	Regression #	Description
LIBSUM	1, 2	Liberalization sum, dependent variable, defined in the Section 4.1
OLD	1	56 and more years old
MIDDLEAGED	1	36 – 55 years old
YOUNG	1REF	35 and younger
MALE	1REF, 2REF	Male
FEMALE	1, 2	Female
COUNTRYSIDE	1, 2	Before going to the university, he/she lived in a municipality with less than 10 000 inhabitants in the Czech Republic
CITY	1, 2	... he/she lived in a city or town with more than 10 000 inhabitants in the Czech Republic (except for Prague)
PRAGUE	1REF, 2REF	... he/she lived in Prague
RICH	1REF, 2REF	Yearly income above 750 000 CZK
NOTRICHNOTPOOR	1, 2	Yearly income between 250 000 and 750 000 CZK
POOR	1, 2	Yearly income less than 250 000 CZK
RELIGIOUS	1	Is Christian or agnostic who tends toward theism
NOTRELIGIOUS	1REF	Is atheist or agnostic who tends toward atheism
VSENF	1, 2	Highest education in economics achieved at University of Economics, Faculty of Economics
BANSKA	1	... at Technical University of Ostrava, Faculty of Economics
FSV	1	... at Charles University, Faculty of Social Sciences
OTHERSCHOOLS1	1REF	Reference category – all the other schools and faculties
OTHERSCHOOLS2	2REF	Reference category – all the other schools and faculties
CSE	1, 2	Is or was a Member of the Czech Economic Society
ACADEMIA	1REF, 2REF	Is a member of academia and is not or was not a member of the CSE
PROF	1, 2	Is a professor or associate professor
NOTPROF	1REF	Is not a professor or associate professor

Source: Author´s definitions of the variables.

Table 8.7: Regression results – all the variables

	n=62	R-squared 0.459	Adj. R-squared 0.313
Name of the variable	**Coefficient**	**Std. Err.**	**P-value (two-tailed)**
β_0	56.11	3.35	0.00
OLD	-1.94	2.95	0.52
MIDDLEAGED	-1.63	2.11	0.44
FEMALE	-4.32	2.12	0.05
COUNTRYSIDE	-5.59	2.94	0.06
CITY	-3.29	2.24	0.15
NOTRICHNOTPOOR	-2.23	2.08	0.29
POOR	-10.23	2.90	0.00
RELIGIOUS	-1.16	1.61	0.47
VSENF	3.52	2.59	0.18
BANSKA	-1.51	2.78	0.59
FSV	-.47	2.63	0.86
CSE	-2.30	1.74	0.19
PROF	-1.37	2.16	0.53

Source: Author´s calculations based on the survey conducted in 2016. Utilized software: Stata 14.

The omitted group are men, younger than 36 years, who were raised in Prague, with earnings higher than 750 000 CZK yearly, atheists and agnostics who tend towards atheism, non-members of the CSE, economists who are not professors or associate professors, and who did not obtain their highest degree in economics at one of the faculties mentioned above. The coefficients significant at the 0.1 level are coloured in grey. The results of the regression correspond with the results in the Section 8.1 – the strongest and the most significant factors are income, gender and the environment, where the individual was raised. It is remarkable that there is a rather minor difference in the liberalization sum between the respondents from Prague and the respondents from smaller cities and towns (variable CITY is insignificant at the 0.1 level), the same holds for the difference between economists who earn yearly more than 750 000 CZK and those who earn between 250 000 and 750 000 CZK yearly (variable NOTRICHNOTPOOR is insignificant). However, the difference seems to be enormous, when economists raised in Prague or raised in the countryside are compared; the same holds for the economists who earn annually more than 750 000 CZK and less than 250 000 CZK. Religion, age, membership in the Czech Economic Society, faculty, and the fact that the respondent is professor or associate professor of economics does not seem to have any impact on the liberalization sum.

Table 8.8 – Regression results – the highest R-squared targeted

	n=71	R-squared 0.442	Adj. R-squared 0.380
Name of the variable	**Coefficient**	**Std. Err.**	**P-value (two-tail)**
β_0	53.78	1.99	0.00
FEMALE	-3.99	1.72	0.02
COUNTRYSIDE	-5.93	2.31	0.01
CITY	-2.62	1.81	0.15
NOTRICHNOTPOOR	-1.65	1.63	0.32
POOR	-9.56	2.44	0.00
VSENF	3.20	1.88	0.10
CSE	-3.19	1.39	0.03

Source: Author´s calculations based on the survey conducted in 2016. Utilized software: Stata 14

The number of observations is rather small, and it is not advantageous to loose degrees of freedom on insignificant variables. The model was therefore simplified.

The omitted group are men, younger than 36 years, who were raised in Prague, with earnings higher than 750 000 CZK, who did not obtain their highest degree in economics at the University of Economics, Faculty of Economics, and who are not members of the Czech Economic Society. The variables significant at the 0.1 level are coloured in grey.

The results of the second regression differ: Variables CSE and VSENF are now significant at the 0.10 level.

This is a very interesting finding; it signifies that economists from the University of Economics, Faculty of Economics tend to have more liberal opinions than the other economists, even after controlling for income and other factors. This is in contrast with the findings of Gordon and Dahl (2013), who assert that there is no systematic difference in responses among economists who obtained their degree from diverse universities.

Moreover, the members of the CSE seem to have lower tendency towards liberalism. Being a member of the CSE signifies by itself certain preference to function in a group, rather than as an individual. Consequently, this preference may be related to the liberalization sum.

8.2.2 Discussion of the MLR assumptions

In order to achieve validity of the multiple linear regression analysis, one need to secure that the MLR assumptions are ensured. Wooldridge (2012) provided a well-arranged breakdown of the assumptions:

1) The model should be linear in parameters. This assumption clearly holds.

2) Random sampling. Detailed discussion can be found in the Section 5.3.

3) No perfect collinearity. There are noticeably no constant independent variables, and there are no exact linear relationships among the independent variables. Variance inflation factor was utilized in order to detect potential multicollinearities. None of the independent variables have VIF above 2.5 in the first regression and 2.0 in the second regression. Certain variables have slightly higher values of VIF (around 2.2 in the first and around 1.8 in the second regression). Nevertheless, this is attributable to the fact that these are dummy variables which represent a categorical variable with three categories.

4) Zero conditional mean. It may be argued that the model fails to meet this assumption. This is attributable to two reasons: Firstly, certain independent variables are clearly of quantitative, and not of qualitative nature (income, age). Nonetheless, asking the respondents about the exact value of their age and income would most probably result in far more complicated issues, many individuals would not complete the survey, or they would report inaccurate or untruthful answer. Secondly, although the author did include many various variables that could potentially explain the opinions of the economists, a large part still remained unexplained (R-squared of the two models is equal to 0.459 and 0.442, respectively). Some important variable may be omitted. The research field of consensus is still rather new and there are yet many things to be discovered.

5) Heteroskedasticity. According to Wooldridge (2012), the estimators of the variances are biased without the assumption of heteroskedasticity. To test for this attribute, the author decided to conduct the 'Special Case of the White Test for Heteroskedasticity' (so as to save degrees of freedom and evade potential issues with the fact that there are only dummy independent variables in the model). Firstly, OLS residuals and fitted values were obtained from the regression. Secondly, auxiliary regression was conducted, with the OLS

residuals squared as the dependent variable, and fitted values and fitted values squared as the independent variables. Consequently, an F-test was performed: And it fails to reject the hypothesis of homoskedasticity at any reasonable significance level; the p-values are equal to 0.64 and 0.62, considering the first and the second regression, respectively.

6) Normality. Strictly speaking, this assumption cannot hold if it is presupposed that the zero conditional mean assumption is not fulfilled. Moreover, the liberalization sum takes on values ranging only from 21 to 63. Nevertheless, the residuals seem to be at least approximately normally distributed. The author conducted the Shapiro-Wilk test, which fails to reject the hypothesis of normally distributed residuals, the p-values are equal to 0.82 and 0.75, respectively. Quantiles of the residuals against quantiles of normal distribution from the first and the second regression model are displayed in the Figure C.1 and in the Figure C.2, respectively (see Appendix C). The residuals from the first regression may be slightly skewed to the right. Still, roughly speaking, it would not be erroneous to claim that the residuals are approximately normally distributed.

Summary: Certain assumptions are not fulfilled. The size of the coefficients and the standard errors should be therefore taken with caution. However, the main objective of the model was to reduce potential problems with sampling and to control for the interdependencies between the independent variables. These objectives were fairly met.

9. Conclusion

The obtained data from the conducted survey indicate that there still seem to be issues on which the Czech economists continually cannot reach an agreement. These mostly include propositions related to the international trade or the minimum wage law. On the other hand, the economists are reasonably sure about the fact that the budget deficit and the government spending should be lower and that the extent to which the university students share the cost of education should be higher. Apparently, the economists do not have almost any objections against the monetary policy of the Czech Republic.

The intertemporal comparison with a comparable survey, which was conducted by Daniel Šťastný at the turn of 2009/2010, showed that the position of the Czech economists in 2016 is slightly less liberal than six years ago. This difference was attributed to the fact that the respondents of the first survey had to be considerably influenced by the aftermath of the Financial crisis of 2007-2008. Moreover, there was an intensive process of rent deregulation, which ended in the period between these two surveys.

Different factors which could potentially determine the level of consensus among economists were examined (three proxies were chosen for the level of consensus – the relative frequency of the most and the least repeated response and the relative entropy index). It was found that economists with a doctorate reach a slightly lower level of consensus than their counterparts. This difference was significant even at the 0.05 level while considering the least frequent response method. On the contrary, it was found that the professors and associate professors of economics reach marginally higher level of consensus than the other economists. This difference was not found to be significant at any reasonable level.

The basic assumption was that the biggest cause of disagreement among economists is the difference in personal and political beliefs, as was shown by Fuchs et al. (1998). The author thus decided to examine the causes of various personal and political beliefs of an economist. Due to the design of the survey, it was feasible to assess, to which extent the opinions of the respondents were liberal or interventionist. The author hence conducted an econometric model and found that the position of the economist on the political spectrum, with respect to his or her opinions, is to a large extent determined by gender (women tend to be significantly less liberal than men), and income (there seems to be a striking difference in the response patterns between economists with a low income

and economists with a high income). The former group tends to have far less liberal opinions. Nevertheless, there does not seem to be such a staggering difference between economists with a high income and economists with an average income – the latter group tends to have less liberal opinions than the former group, although the difference is not significant at any reasonable level. These conclusions support the findings of Šťastný (2011b), who came to the similar conclusions. Another factor showing a considerable impact is the place where an individual was raised – economists who grew up in the countryside tended to have far less liberal opinions (this is one of the key findings of the thesis, this analysis has not been conducted in any similar study before). There did not seem to be any correlation with the age of the respondent, which is therefore in contrast with the results provided by Šťastný (2010b) who asserts that the tendency to be liberal decreases with age.

Moreover, it was found that economists who got their degree at University of Economics, Faculty of Economics (Národohospodářská fakulta Vysoké školy ekonomické) tend to have more liberal opinions than their peers from other schools, even after controlling for other variables such as income, or the place where the economist was raised. This gets in contrast with the findings of Gordon and Dahl (2013) who claim that economists who got their degree from different schools do not tend to have significantly different patterns of economic opinions.

These surveys are known for the fact that the responses come only from members of various economic associations. One of the questions for further research of Klein and Stern (2004) was whether the results could differ when other types of economists would be included in the sample and not only members of economic associations. This thesis partly answers this question; the target group of the respondents were the CSE members and members of academic departments. There seems to be a systematic difference arising between these two groups as the CSE members tended to have less liberal responses. This also provides motivation for any further study: It may be recommendable to conduct another survey for other types of economists – i.e. those working in the public or private sectors.

There are yet many factors to be discovered which affect the tendency of an economist to have liberal opinions – the econometric models constructed by the author explain only approximately 45% of the variation in the proxy variable for the degree of liberalism. This is, however, still an exceptional result, given the fact that the measured

variable is a certain intangible abstract value. In psychology, the values of R-squared are typically even lower.

Last, but not least, there are far more policy issues which should be discussed than the ones covered in this thesis or in any other past surveys. As shown by Whaples (2009), it may be very beneficial to conduct other surveys covering very different policy issues rather than the typical ones. The economists then could better realize which propositions they reach strong consensus on and what the government should change. Consequently, after realizing that they are unified in their opinions on some proposition, they may pursue the desired policy reform more vigorously and with greater self-confidence.

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Appendix A: The questionnaire

Link to the questionnaire 1 (CSE version): http://goo.gl/forms/ZFmPa1gbXJ

Link to the questionnaire 2 (academia version): http://goo.gl/forms/kKLfHeayJx

List of questions (question n. 25 located only in the questionnaire 2):

A. General View

1: Do you think that the economic policy sufficiently reflects insights provided by economic theory and policy recommendations made by economists, i.e. that economic policy does not systematically distort them?
   a) yes
   b) no

B. Particular Policy Opinions

2: The extent to which trade barriers (tariffs, quotas etc.) are used should be:
   a) higher
   b) unchanged
   c) lower

3: The extent to which antidumping and similar trade-political proceedings against foreign producers are used should be:
   a) higher
   b) unchanged
   c) lower

4: The extent to which policy-makers pay attention to the balance of trade deficit should be:
   a) higher
   b) unchanged
   c) lower

5: The size of the government budget deficit should be:
   a) higher
   b) unchanged
   c) lower

6: The size of the government expenditures should be:
   a) higher
   b) unchanged
   c) lower

7: The marginal income tax rate should be:
   a) higher
   b) unchanged
   c) lower

8: The size of the overall tax burden should be:
   a) higher
   b) unchanged
   c) lower

9: The rate of the money supply growth should be:
   a) higher
   b) unchanged
   c) lower

10: The level of the inflation target set by the central bank should be:
   a) higher
   b) unchanged
   c) lower

11: The extent of regulation aimed at environmental protection should be:
   a) higher
   b) unchanged
   c) lower

12: The extent of regulation aimed at consumer protection should be:
   a) higher
   b) unchanged
   c) lower

13: The extent to which the anti-trust authority interferes with the economy should be:
   a) higher
   b) unchanged
   c) lower

14: The level of difficulty the labour legislation imposes on laying off employees should be:
   a) higher
   b) unchanged
   c) lower

15: The legislated labour union power should be:
   a) higher
   b) unchanged
   c) lower

16: The extent of regulation of trade with illicit drugs (addictive substances) should be:
   a) higher
   b) unchanged
   c) lower

17: The extent of regulation of trade with human organs should be:
   a) higher
   b) unchanged
   c) lower

18: The level of the legislated minimum wage should be:
    a) higher
    b) unchanged
    c) lower

19: The level of the legislated maximum rent that can be charged for apartments should be:
    a) higher
    b) unchanged
    c) lower

20: The extent of government support of agriculture should be:
    a) higher
    b) unchanged
    c) lower

21: The extent to which university students share the cost of university education should be:
    a) higher
    b) unchanged
    c) lower

22: The extent of investment perks offered by government should be:
    a) higher
    b) unchanged
    c) lower

C. Respondent Information

23: Age:
    a) 25 or below
    b) 26 to 35
    c) 36 to 45
    d) 46 to 55
    e) 56 to 65
    f) 66 or more
    g) I decline to answer.

24: Gender:
    a) male
    b) female
    c) I decline to answer.

(25: Are you a member of the Czech Economic Society?)
    a) Yes, I am a member.
    b) No, however, I was a member.
    c) No, I am not and I was not a member.
    d) I decline to answer.

26: Please name the university and the faculty, where you have obtained your highest economics degree; or degree in some related field (consider JEL classification)
   a) CERGE-EI
   b) Masarykova univerzita v Brně – Ekonomicko-správní fakulta
   c) Univerzita Karlova v Praze – Fakulta sociálních věd
   d) Vysoká škola báňská – Technická univerzita Ostrava – Ekonomická fakulta
   e) Vysoká škola ekonomická – Národohospodářská fakulta
   f) Vysoká škola ekonomická – Podnikohospodářská fakulta
   g) I decline to answer.
   h) other _____

27: What is your highest degree achieved in academia? (Consider only economics degree and related fields of study).
   1) a bachelor´s degree
   2) a master´s degree
   3) a doctoral degree
   4) I decline to answer.
   5) other _____

28: What is your academic appointment within a set structure of academic ranks?
   a) I do not work in academia.
   b) assistant lecturer (and equivalents) = asistent in Czech
   c) lecturer (and equivalents) = odborný asistent in Czech
   d) associate professor = docent in Czech
   e) professor = profesor in Czech
   f) I decline to answer.
   g) other _____

29: Considering the stage of your life before going to the university, you lived:
   1) in Prague
   2) in a large city in the Czech Republic (more than 90 000 inhabitants, except for Prague)
   3) in a small city in the Czech Republic (10 000 – 90 000 inhabitants)
   4) in a municipality, in the countryside (less than 10 000 inhabitants)
   5) I decline to answer.
   6) other _____

30: What is your gross income per year? (in CZK)
   1) less than 250 000
   2) 250 000 – 500 000
   3) 500 000 – 750 000
   4) more than 750 000
   5) I decline to answer.

31: Please indicate the most suitable answer.
   1) I am an atheist.
   2) I am an agnostic who tends toward atheism.
   3) I am an agnostic who tends toward theism.
   4) I am religious (Christian).
   5) I decline to answer.
   6) Other _____

Appendix B: Tables

Table B.1: CSE vs. academia comparison

Proposition	Mean CSE	Mean ac.	Entropy CSE	Entropy ac.
2. TRADE BARRIERS	2.28	2.43	0.88	0.86
3. ANTIDUMPING	1.90	2.21	0.96	0.97
4. TRADE DEFICIT	1.67	1.85	0.92	0.98
5. BUDGET DEFICIT	2.87	2.89	0.35	0.31
6. GOV. EXPEND.	2.64	2.62	0.70	0.70
7. INCOME TAX	2.46	2.50	0.84	0.79
8. TAX BURDEN	2.59	2.68	0.74	0.64
9. MONEY SUPPLY	2.10	2.02	0.79	0.82
10. INFL. TARGET	2.12	2.13	0.79	0.78
11. ENVIR. PROT.	1.77	1.74	0.91	0.95
12. CONS. PROT.	1.72	1.83	0.90	0.95
13. ANTI-TRUST POL.	1.96	2.04	0.93	0.85
14. EMPLOYEE PROT.	2.43	2.45	0.79	0.80
15. LAB. UNION POW.	2.30	2.51	0.88	0.80
16. ILLIC. DRUGS	1.64	1.81	0.91	0.95
17. HUMAN ORG.	1.46	1.64	0.68	0.89
18. MINIMUM WAGE	1.90	2.21	0.94	0.95
19. MAX. RENT	2.16	2.34	0.86	0.91
20. AGRICUL. SUPP.	2.35	2.34	0.91	0.92
21. TUITION FEES	2.61	2.68	0.73	0.64

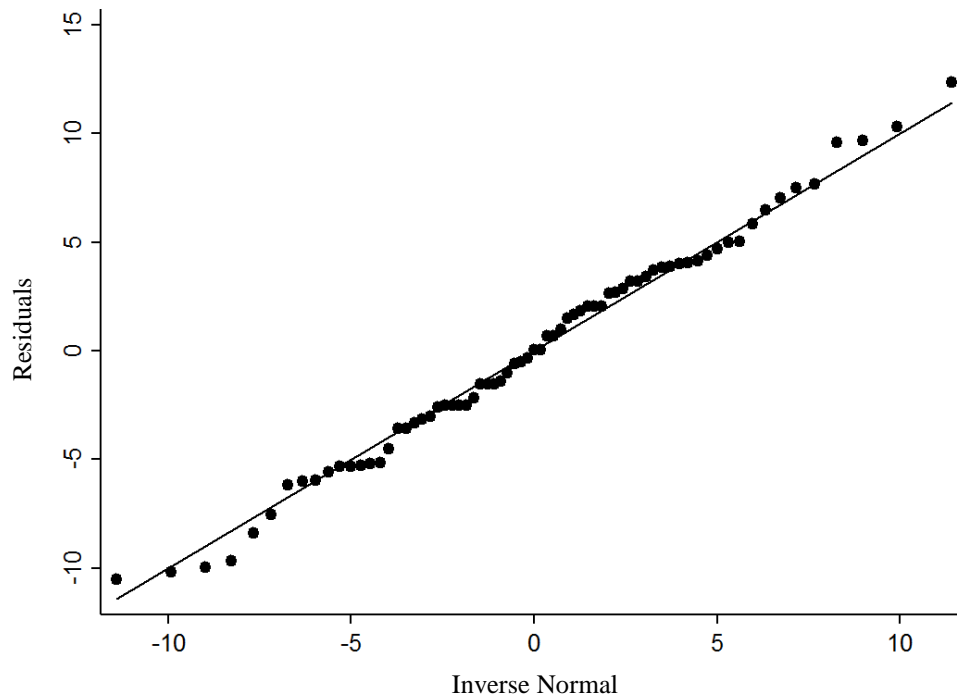*Source*: Author´s calculations based on the survey conducted in 2016.

Appendix C: Figures

Figure C.1: Q-Q plot – residuals from the first regression vs. normal distribution
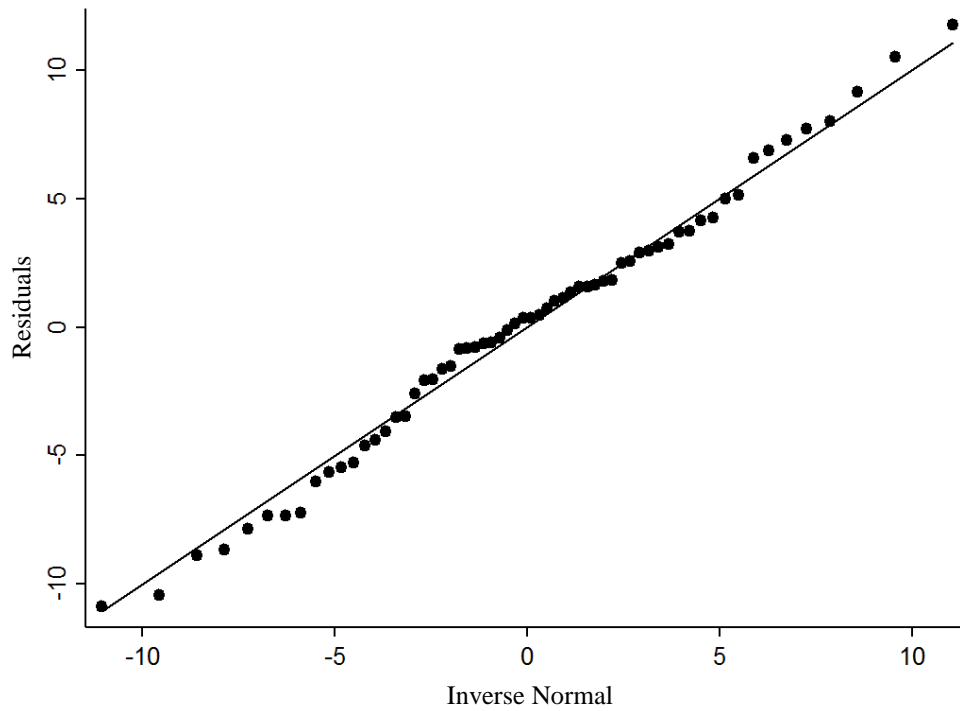
Source: Author´s calculations based on the survey conducted in 2016. Utilized software: Stata 14

Figure C.2: Q-Q plot – residuals from the second regression vs. normal distribution

Source: Author´s calculations based on the survey conducted in 2016. Utilized software: Stata 14