

Trust to Political Infographics: What Makes People Trust Visual Information? Case of Russia

By
Lika Mchedlidze

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Supervisor: Inna Melnykovska

Abstract

Why are the political infographics trusted or distrusted? The study investigates the effects of political partisanship of the individual and complexity of the infographic's layout on the propensity to trust political infographics. It combines the methods of focus groups and survey. The case for research is Russia due to its fairly sharply divided political arena that allows to effectively capture variations in political partisanship. Four infographics presenting a non-salient topic of healthcare system funding are designed and firstly tested on the focus groups. Infographics changed accordingly with the focus groups insights are used in the online survey. Sample of 731 university students is analyzed with logistic regression and classification tree model to test the hypotheses. Neither individual's political partisanship, nor the complexity of the layout have an effect on trust to infographics. However, general trust in information is statistically significant in most of the models. While the research contributes to the understanding of the factors driving trust to infographics, further studies based on the findings discussed here are able to clarify revealed inconsistencies.

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Introduction

The information is getting more and more complex with time. People obtain more data, and they develop sophisticated techniques to work with this data. However, if the information is not trusted by the audience, then it is basically useless and lost in a vast amount of data. That is why the trust in information is a crucial parameter the information should strive for.

Trust in information can be facilitated by various factors coming from the environment around the material itself (Van de Velde et al. 2011; Sillence et al. 2017; Gualda and Rúas 2019), or because of the correctly chosen audience (Kelton, Fleischmann, and Wallace 2008; Ye 2011). Moreover, influencing parameters can depend on the form of the information representation too (Enikolopov, Petrova, and Zhuravskaya 2011; Kuosis 2001).

To convey a message, one might want to speak with the audience via visual representation, since visuals are easier to process (Cleveland and McGill 1984; Siricharoen 2013; Otten, Cheng, and Drewnowski 2015). One of the most popular ways to depict the information graphically is to create an infographic. Defined by Harrison, Reinecke, and Chang (2015, 1187) as *a collection of one or more visualizations that have been manually modified to highlight specific points about the data*, infographics are becoming more and more powerful than traditional texts (Attneave 1954). Infographics have a capacity to influence the people's attitudes more effectively than other means of information delivery (Lee and Kim 2016, 1579; Flanagan, Winter, and Metzger 2018, 2), what makes them especially prominent to study.

As many newly developing fields, infographics have many features that are not yet described and properly researched. One of such features is the trustworthiness of the infographics. The credibility of the information and its ability to convince people with established beliefs are capable to shift one's attitudes (Feldman 2011, 176), and it might be the most important for the material to be able to have such a power. While generally speaking the

information can be whether trusted or not trusted, there are numerous factors that can influence this conscious or unconscious decision.

Narrowing down the topic of trust, and in particular trust to infographics, one can turn to political infographics. Increasing popularity of the infographics leads to its more often usage to present political agenda that can be seen as too complicated and boring to the ordinary citizens (Graber 1988).

These observations on a topic of trust create a puzzle, where it is unclear what are the factors that lead people to trust visually presented information. It was already discovered by Dur that infographics can invoke unpredictable behavior of the audience as well as different patterns of their perception (2012, 280-281). There is a ground to assume that trust is expressed differently too. Thus, the research question is *Why are the political infographics trusted or distrusted?* Possible explanations should represent various combinations of both topics of trust and political infographics.

First major assumption relies on political partisanship of the people who see the infographics. Processing of the data is done differently by the people with polarized views, and political partisanship tends to push the audience to a perceptual bias (Jerit and Barabas 2012, 672). Additionally, various studies confirm that being politically partisan leads to a bias towards political information (Jerit and Barabas 2012; Kim 2016; Perryman 2019). The effect of visual depiction of the information can be even stronger, due to the enhanced effects of age and education (Herrera-Guzmán et al. 2004).

Political partisanship is a type of individual's initial standing, and having a certain position is important for the outcome of information processing. When the information is not demanding in terms of the perceptual costs, people tend to believe it, especially when their prior beliefs are fairly neutral (Lee et al. 1999, 79, Lee and Kim 2016, 1596). Furthermore, faster

processing of the information leads to a higher chance that the message is well-perceived (Siricharoen 2013, 169).

The second assumption is connected to the individuals' main occupation and its relation to partisanship. Since the sample of the study consists of university students, their major activity is education. Therefore, an academic track they are enrolled at can contribute to their propensity to trust political information (Campbell 2005; Claes and Hooghe 2017).

The third and final assumption focuses on one of the most important features of the infographics, which is their simplicity of the layout. Not every infographic is designed in an easy for processing way, and it is unclear how badly designed, complex infographics would work, and whether simplicity is such an important factor for the trust to the infographics. Some pieces of evidence suggest that it is more likely that the individual skips complex infographic with no attempt to comprehend it (Few 2013).

The answer to this question contributes to both political, and social aspects of people's lives. Politically, the infographics can be used more effectively in the future, since their strongest effect for different societal groups is known. The social aspect is related to the application of the obtained results in further studies that concern people's trust in general. In addition, innovative part of the research is also reflected in the absence of the sources on the infographics, so the participants cannot relate to the political body that is responsible for the data and to decide to trust or not on the basis of trust to the widely mentioned political institution.

The dependent variable is a reaction to the infographics, which is measured dichotomously as trust or distrust. Control variables are a stage of education, age, gender, trust in information, and trust to people. Political partisanship is a continuous independent variable, and academic major is a conditional categorical parameter. Complexity of the infographic is a

third explanatory parameter, and it is not measured during the study, but randomly assigned to the individual in the sample.

Additionally, participants are asked the questions that involve the evaluation of trust to the news sources, information on the Internet, and change in the political views recently. These questions can be helpful for the operationalization of general trust and political partisanship.

There are two hypotheses to be tested. Each of them addresses different variables that are expected to have an effect on trust to the infographics. First, strong political partisanship in general is supposed to lead participants to express trust to the infographics in line with their political standing. Moreover, it is assumed that majoring in social sciences contributes to higher consistency between political partisanship and trust to the infographics of different political affiliations. Thus, an academic major is a condition that is able to enhance the power of political partisanship.

The second hypothesis states that politically neutral people are expected to trust complex infographics more, and simple ones less due to higher propensity to trust the information that is presented in a complex manner if one does not have any expertise in a topic. Elaboration on the hypotheses takes place in the following parts of the work.

The case for the research is Russia. This case can be considered as a most-likely case among countries lacking in freedom of media (Freedom House 2017). Substantially speaking, the choice Russia is justified by political circumstances of the country that create a quite dichotomous division of the political actors (Gel'man 2015). Therefore, the citizens are mostly distinct in their attitude to the government, and they whether support it or not. Absence of political parties presenting various sides of the political spectrum contributes to the more effective catchment of one's political preferences by the message of the infographic.

Several steps are implemented to answer the research question. Four infographics are varying in the complexity of the layout and their political affiliation are designed: two with

simple layouts, and two with complex layouts. One infographic of which layout type favors the government, whereas the other stands against the incumbent.

The first methodological step is conducting pilot research, in particular focus groups. This gives an overview of how the infographics are perceived, and whether their design is perceived as intended. Next each infographic is assigned to the separate questionnaire, where give their replies to what further becomes control and independent variables. After that respondents see randomly assigned infographic, and then they reply whether they trust the infographic or not.

Gathered data is analyzed with logistic regression models. For additional insights classification trees are built and examined. The hypotheses are discussed using the results derived from these methods.

The research starts with the review of the literature to overview already done studies in the field of trust, infographics, visual perception, and political partisanship. It is followed up with an explanation of the research design, where hypotheses, case, and infographics' layouts are elaborated on. Finally, detailed empirical part presents the findings, tests the hypotheses, and outlines the limitations and directions for future research.

Chapter 1 – Background of the topic, expectations, and case

1.1 Literature review

1.1.1 Literature on trust

The literature related to the topic is fairly diverse and can be arbitrarily divided into the group that studies exogenous facilitators of trust, and endogenous ones. The former is supposed to come from the information, whereas the latter should be related to the audience and its inherent features.

Starting with the literature on exogenous factors influencing trust, the studies highlight different ways how the information representation can change trustworthiness of the information. Gualda and Rúas (2019) investigate how the trust to the information on the Internet is affected by the conspiracy theory. From the survey conducted on Andalusians, the authors find that 68% of the respondents distrust the information they receive from the Internet, assuming that this information is purposefully withheld from them.

Van de Velde et al. (2011) focus on Belgians and their trust in information about biofuels, attempting to identify the most trustworthy channels and source of information. The scholars distinguish four clusters of consumers, varying in their preferences from where and whom to obtain information. Generally speaking, newspapers and brochures with references to scientist, environmental and consumer organizations are considered the most credible sources of information about biofuels.

Another group of exogenous factors influencing trust in information is specific to online sources. Sillence et al. (2007) analyze how women processed the health advice posted on the Internet, and whether they trusted them or not. Web site design and content related factors were found the most important. In particular, clear layout, navigation aids, interactive features combined, informative content, impartially presented information, and simple language were decisive for a woman to trust online advice.

Moving to endogenous facilitators of trust, Kelton, Fleischmann, and Wallace (2008) examine trust to digital information and how levels of trust can impact propensity to trust. The authors findings reveal that both quality and possible usage of the information are the crucial factors that define one's decision to trust. Additionally, the scholars specify that positive emotions and experiences with information, a propensity to trust in general, and reputation of information increase a change that individual trusts the information.

From a demographic perspective, Ye (2011) found that age is a key parameter for understanding whether one would trust health information posted on the Internet or not. Groups of people of 35-49 and 50-64 years showed the highest propensity to trust health-related materials in the Web. The scholar also finds that income, education, and health status are not correlated with one's trust to the information. Even though control for age is a crucial parameter, it is not highly relevant for the study conducted on the same age cohort as university students.

The studies in the field of trust do not address the trust in the visually presented information, which is widely used in different digital media sources. Hence, it is not evident whether the tendency to trust or mistrust will work distinctively in the case of the infographics. It is indeed essential to control for the trust in information since infographic is one of the ways to present the information in the first place. However, the current study neither addresses trustworthiness of the source, nor the reasons behind not trusting the infographics. These topics are big enough to be covered by a separate study, designed specifically to answer related questions.

1.1.2 Literature on infographics

Studies on the infographics are divided into several streams that are connected to the various fields. One of the most obvious presents the infographics as the special part of the media. Therefore, informational graphics are studied together with the texts and the focus is on

the benefits of the former over the latter (Howells and Matson 2009; Lee and Kim 2016). This approach is useful when scrutinizing the general advantages and peculiarities of the infographics. However, the studies of this stream disregard the mechanisms of the infographics' influence, equalizing them with other ways of information acquisition.

Another group of scholars focuses on the unique features of the visual information. The studies of this field examine the graphic aspects of the infographics, considering the technical peculiarities and the mechanism of the visual perception (Griffin and Stevenson 1992; Otten et al. 2015; Borkin et al. 2016). This stream distinguishes the causal mechanisms of how exactly infographics work. Nonetheless, the studies are majorly written in the field of cognitive psychology, ignoring the implications for political science or any other field.

The infographics are usually considered as a particular part of the media and information sources (Howells and Matson 2009; Lee and Kim 2016; Lyra et al. 2016). These studies focus on how the infographics differ from the textually presented information, and whether they have the outstanding features inherent in themselves, or only when they are embedded in the text. Well-studied field of infographics in various media channels contributes to the better understanding of the features of the infographics, although it leaves infographics as an independent source of information aside.

Considering some of the papers on infographics in media, Lee and Kim (2016) research how the individuals process different types of the information representation and what are the features of every way to present the news. They suggest six experiments where they use the text and graphics solely and in combination, additionally duplicating this design by adding hyperlinks in the text. Treating infographics as an additional material that has an effect on the one's news elaboration, acquisition, and evaluation, Lee and Kim assume that due to their nature devoted to the enhancement of the already existing understanding, the inclusion of the graphics will lead to a wider gap between those who have a prior knowledge on the issue, and

those who do not. The authors find that the graphics contribute to a more favorable evaluation of the news by the readers, although do not make them learn more from the article as the audience relies on their motivation to process the news. In other words, the infographics engage those, who are not interested in a substance of the news, and the graphics do not lead them to a better news acquisition.

The opposite argument that the infographics have the capacities to educate well is presented in the work of Lyra et al. (2016). They test whether the infographics have an effect on the learning, and how individual preferences as the learning style and students' satisfaction have a capacity to contribute to learning via infographics. Unlike the former work that has a sample size of 360 web-based participants recruited by the email invitations, this study includes offline-based experiment involving 27 undergraduate students. Even though the latter case can look easier to conduct, it required the post-test in order to analyze how well the information is remembered by the participants, so the study is more time-consuming than the Lee and Kim's. However, the contrast between these two works represents different impacts of the infographics and the way they can be measured and assessed. Nevertheless, none of the works includes the trust to the infographics as the variable that has to be incorporated into the scope of the study.

The results of the study reveal that there is no considerable difference in the learning style between those who learned the information using only infographics and those who studied with the graphics combined with a text. Moreover, the infographics have the propensity to be remembered better and longer, as well as to contribute to the enjoyment of the students.

These studies present the polarity of the views on the infographics being useful when speaking about the education and information acquisition-related benefits. The findings contribute to understanding how the infographics are different from the conventional means to deliver the information; however, it does not represent how specifically any type of information processing is able to vary.

The only stream that works with the reasons of the difference in the perception focuses on the features the infographics should have in order to be effective in terms of understanding and memorability (Borkin et al. 2011; Cairo 2012; Siricharoen 2013; Borkin et al. 2016). For instance, Borkin et al. (2016) study how the style, positioning, shapes, and the colors of the infographics can affect perception of the individuals. The findings reveal that more colorful images, as well as high visual densities, enhance the memorability, while the common graphs as circles, bars, and lines contribute to lower memorability scores than diagrams, trees, and networks. The knowledge about the most successful attributes of the infographics contributes to the creation of the design that achieves its goal with a higher chance. However, the research design does not suggest a control for any of the participants' characteristics, hence it is not evident whether the perception of the infographics varies within the certain groups differently than within the others. Neither this stream, nor the former one considers the intrinsic motives to remember, evaluate, or trust the infographics.

Studies on the infographics create a solid basis for the research of infographics separately from any additional channel of information. Evidence on the beneficial infographic layout is especially useful since they contribute to the better targeted visual representation regardless of the purposes of the study. Controlling for endogenous factors such as demographic and background data about the audience and conducting research that is focused on trust to infographics rather than memorability and interpretation can certainly contribute to the growing field of infographics related studies.

1.1.3 Literature on political partisanship

Political partisanship is one of the issues that divide people depending on their standings. The perceptual bias that is induced by the person's initial political affiliation is relatively well researched (Bartels 2002; Iyengar and Hahn 2009; Jerit and Barabas 2012; Prior 2013). The study of Bartels (2002) is centered on the long-term partisans and how they process

the information regarding both the party of their choice and the opposite one. Applying the panel data to the Bayesian model of opinion change, the scholar detects the partisan bias. The evidence shows that constantly being loyal to the party shapes the perception of the political world of these people, therefore they tend to have similar views on every topic as the party they prefer does.

These findings represent that the political partisanship influences information perception as well as defines the further standings. However, from the study of Bartels, it is not evident whether people simply do not believe the information and share the party's views, or they choose not to expose themselves to the sources contradicting their beliefs. Conversely, Jerit and Barabas (2012) study the perceptual bias in the USA in the 1990s and 2000s, while being interested in whether the information environment moves the partisans to expose themselves to the information incongruent with their own beliefs, and more importantly, to remember this information. According to the conclusion the authors arrive at, being partisan to any party leads to the individual's lack of knowledge about the opposite party and to the extensive knowledge about the one they like, even though the media coverage was approximately the same for each party.

Therefore, political partisanship is a parameter that represents one of the topics individuals usually have an opinion on. Moreover, a certain level of existing media bias among the partisans possibly influences trust in information presented by the infographic as in case of other information sources.

1.1.4 Literature on visual perception

The stream in the literature that researches the processes of the visual perception is able to advance the understanding of how the infographics contribute to the substantive difference between the stated standing and the actual trust to the depicted information. The literature related to this issue is mostly concentrated on the very process of the visual perception,

elaborating on how the image or graph processing goes (Cleveland and McGill 1984; Cleveland and McGill 1985; Tsal and Nilli 1988; Lohse 1993; Herrera-Guzmán et al. 2004).

Since the infographics are the images containing informative and graphical parts, the graph comprehension is the crucial parameter. Cleveland and McGill (1985) study the decoding of the quantitative and qualitative information encrypted on the graphs. They focus on the features of the graphical perception, analyzing how people process various types of information depicted on the dot charts, turkey box plots, graphing on a log base 2 scale, and two-tiered error bars. The authors order the tasks that the graphs should perform accurately to be perceived correctly – position of the graphs needs to be the most accurate, while the colors can vary with no loss in the quality of the perceived message.

While concentrating on the benefits of different graphs' types, the scholars mention the importance of the clear understanding of the task before the individuals processing the graphs, and in case they do not get the assignment they need to complete, the evaluation of the graph is unreliable. The design of the experiment supposes the Cleveland and McGill consider only the information extraction, however, they do not control for the personal characteristics, which can become a decisive factor for the visual perception.

The work of Herrera-Guzmán et al. (2004) test whether education, gender, and age influence visual perception. They study the probable effect of these parameters on the normal elderly Spanish population using The Visual Object and Space Perception Battery (VOSP) – 8 subsets consisting of the object and space perception measurements. The findings reveal that even though sex does not affect visual perception, whereas education and age contribute are consistent with certain outcomes. The scholars claim that the greater age and poorer education contribute to the worse visual processing, albeit the results largely depend on the backgrounds of the individuals.

Finally, there are studies that work exclusively with the complexity of the information. For example, Ionescu (2016) researches the optical capacities to consciously process the information obtained from the slideshows with the complex images changing each other with different speed. The findings reveal that there is a certain threshold for the visual cognition that contributes to the proper comprehension of the image. Even though the change of the images and its speed is not included in the scope of the current study, the findings regarding the special circumstances around the complex images prove that there are peculiarities that should be considered. However, there is no literature on the effect of the infographics' complexity on the trust to these infographics.

As a result, the literature covers a variety of the topics, although missing the ones that are located on the intersection of the studies on the partisan bias with the works on the infographics' mechanisms of influence. Combining the findings from the different streams and disciplines, the research on the political infographics' perception will fill the gap contributing to the better understanding of how the infographics impact the instantly forming political opinions and reactions.

Summing up, there is a lack of studies conducted in the narrow field of trust in information presented in the political infographics. A gap in the studies on the trust to visual information leaves the factors driving trust to increasing in popularity infographics unclear. Building on the findings from the research on political partisan media bias and infographics' fast processing, the current study attempts to identify whether political partisanship and infographics' complexity have an effect as they do in different channels of information. Even though the source of the information and elaborated reasons why one does not trust particular infographic are not examined here, the studies on these topics could be based on the evidence found here.

1.2 Research design

1.2.1 Hypotheses

Substantively speaking, political partisanship is assumed to have an impact on the perception of the infographics. Hypothesis 1 concerns the political partisanship and its relationship with the trust in the informational graphics. It supposes that being in an opposition to the incumbents leads the person to believe only oppositional infographics. Accordingly, this hypothesis also predicts that being partisan to the ruling political figures contributes to the one's stability in the views and perception of the graphical data.

Taking into consideration a specific case and demographic variables, it is assumed that education has a considerable effect that occurs naturally regardless of the political attitudes. Students that are studying related to the political science subjects are supposed to be more interested in politics itself, so their political views are clearer than of those who do not discuss the political issues on a regular basis (Claes and Hooghe 2017, 10). Hypothesis 1 also forecasts that students majoring in social sciences trust only those infographics that reflect their political views. To test this part of the hypothesis, the experiment suggests having academic discipline one studies as a conditioning factor.

Hypothesis 2 is related to the complexity of the infographic's layout. It states that visually simple infographics cause less trust, especially among those who are politically neutral. In turn, complex infographics are supposed to be trusted more, and the same as previously, politically neutral individuals are assumed to trust more than the partisans.

In order to check the hypotheses, two steps of data gathering are needed: focus groups and a survey. While the first part is needed to affirm that the infographics achieve the intended perception of complexity, the analysis of the survey's results has a goal to discuss the hypotheses.

1.2.2 Case

The study is conducted on the case of Russia, which is considered a most-likely case for autocracies. One of the reasons for that is related to the high level of political absenteeism among the population. According to Levada-Center, 52% of citizens are not interested in participation in politics (2017). This evidence is able to reinforce a tendency to be neutral in terms of political partisanship and to believe the information more easily. The disinterest of the people in politics makes them more susceptible to the fluctuations in the decision-making due to the lack of confidence in their position (Eysenck and Keane 2010, 541).

Another reason is connected to the regime type and its continuity. For 18 years the power is concentrated in the hands of the president, who is the same person, Vladimir Putin. In 2008 he became a prime minister, still significantly influencing main political decisions of the state (Hale and Colton 2010, 3). It leads to people's acquaintance with political actors to at least a minimum extent, which increases the chance that from a relatively small sample the number of random responders is minimal (Meade and Craig 2012).

In addition to these factors, characteristics of the Russian political regime are important for the political partisanship in the state. The political system has become dichotomous, dividing the political partisans into two groups – supporting, or opposing the government (Gel'man 2015). This dichotomy makes the decision whether the information is trustful or not easier for the people due to the relative parsimony of the political choices. Even though the infographics' effect is not well-studied yet, it can be assumed that it is not the same, but similar to the visual media effect in general (Howells and Matson 2009, 4).

The sample consists of students of different Russian universities. The reason why only students are eligible to participate in the research is related to the relatively narrow distribution of their age and education. Since the survey platforms are not popular among Russians, and the most usable website in the Russian segment of the Internet is VKontakte, the survey is conducted there. Thus, due to the limitations of the social network's size and the

passiveness of the users to participate in the unpaid surveys, the sample size is not expected to be more than 700-800 participants, which is the minimum number of the participants needed for the current research design. Consequently, due to these limitations, a wide range of age and jobs is not recommended, because the amount of the obtained data is not going to large enough to scrutinize it properly. Instead, students represent one age cohort, and their active student status unites them in terms of their daily activities.

1.2.3 Infographics' design

For the purposes of the study, complex and simple layouts of the infographics are designed with only difference in the political affiliation. While one presents the facts that speak in favor of the government, another is encoded with the same information, but against the government. The visual part remains the same, thus the effect of the difference in design is anticipated. Substantially the images contain the statistical information on the political issue that is not salient by the time the survey is conducted. The usage of the nonreal information allows creating the infographics that are almost identical.

Condition about non-salience is crucial. The salience has a capacity to undermine the credibility of the results obtained in the frame of the current research since it does not pursue the goal to consider the issue salience anyhow (Bélanger and Meguid 2008, 479). An additional variable that evaluates salience of the issue is meaningless as it leads to higher complexity and possibly lower quality of the research design.

For the current study financing of medical care in Russia is chosen as the non-salient issue. By the time the focus groups are conducted, there was no mentioning of the medicine related topics in the news. The only issue that was salient in Russia in a month prior to the pilot research and which can be connected to medical care is the pension reform. However, the discussion of the pension reform is connected solely to the life expectance that is not covered by the infographics (Meduza 2018a).

The infographics mention the amount of money and relative growth in spending by the government on medical care. The data is fictional, and the only real part about it is the approximate values that are mentioned. There is no discretization of the sources, since they are not cited in order not to influence the participants by the authorities' affiliation.

The complexity of the infographics is regulated by the visual depiction of the information. In particular, the simple infographics involve more descriptions, understandable icons, and clear picture with only two main colors. In turn, complex infographics show a compound network that is purposely designed for being difficult to understand. The complex layout of the infographics does not provide elaborated comments on the data and its direction. Thus, the only way to extract the information from the graph is to examine it very carefully, what is rarely done by ordinary people who are not much interested in a random infographic seen on the Internet (Sülflow et al. 2018, 16).

Finally, each infographic contains a description of the graph. The description is identical for oppositional and pro-governmental infographics regardless of their complexity. It contains the short paragraph explaining the idea of the infographic, so it looks more real. The description is fairly partisan, and it additionally confirms the tone of the infographics.

Chapter 2– Data collection

2.1 *Focus groups*

2.1.1 *Why focus groups?*

Powell et al. define focus groups as “a group of individuals selected and assembled by researchers to discuss and comment on, from personal experience, the topic that is the subject of the research” (Powell et al. 1996, 499). Focus groups are an efficient method to generate data by both extracting it from the conversation with the participants, and from the interactions between the participants.

Kitzinger highlights the importance of focus groups for engaging those, who tend to say that they “have nothing to say” (Kitzinger 1995, 299). It is indeed common reply among respondents when they are asked very specific questions, whereas during the focus groups such participants can feel more relaxed and less pressured by necessity to talk, hence more freely contributing to the discussion. Focus group is also a great source of data for preliminary research, providing just enough insights that can reveal the strongest and the weakest sides of the research design before the major amount of data for the study is gathered (Morgan 1996, 3).

Apart from the benefits, focus groups have drawbacks too. One of the major ones is examined by Morgan (1996, 32), and it addresses the issue of privacy of the participants. While one-on-one interviews guarantee a high level of privacy, it cannot be assured in the group of many people. This can lead to being reluctant to participate in a discussion, or even lie instead of sharing true views and ideas. It is especially crucial in authoritarian regimes, where one can be uncomfortable to share their opinion on political matters (Roller 2013, 52; Shih 2015, 20). Such an obstacle can be overcome by designing a friendly environment, where participants trust each other and feel unthreatened to express their political views.

2.1.2 *Design of the focus groups*

The data collection is done in two stages. The first one is conducted in a form of the focus groups, and the second is in the form of a survey, where the respondents are supposed to answer the questions regarding their age, gender, the region they are initially from, and academic major.

Focus groups serve as pilot research. Their goal is to hear the views on the infographics, and how they are perceived and why exactly so. The interactions within the groups are able to uncover the range of the opinions that could be relevant for the actual participants of the survey. More than that, different views can show some parts that the research might miss or misinterpret. Finally, the group dynamic tends to calm down extreme views if they are rare, or to encourage them if such views are relevant for all of the participants. In both cases, the community norms can be identified and taken into account during the experimental parts, and in the latter case, the commonality of radicalization signifies that some parts are not perceived properly.

Conducted focus groups have 5-7 participants and 2 focus groups. This size of the groups is optimal, since the discussion is easy to sustain, while everyone has a possibility to speak up. One focus group discusses one randomly chosen simple infographic, and another – complex one. Each of the relevant discussions is followed up by the comparison of just seen infographic with one that is different in terms of complexity, and after that, the participants have to discuss the opposite in terms of the political affiliation infographic. For example, if one group gets simple infographic reflecting the pro-governmental views on the medical care' financing, then after its discussion the participations are distributed with the pro-governmental complex infographic, and in the end, they get the infographic that is simple and reflects the views of the opposition. Each infographic is followed up with a question whether the participants trust or distrust the depicted information and why so.

These three steps are devoted to uncovering of the perception of the different types of graphics both in terms of complexity and political affiliation. Comparison between different types reveals whether the infographic is perceived as complex or simple only in comparison with the opposing type or as such. Regarding the political affiliation of the graphs, it is important to trace the sustainability of the views when the participants are exposed to completely opposite numbers on the charts. This would capture both participants' seeking for the sources, and their propensity to change the view once the opposite information is faced.

This approach of conducting the focus groups is beneficial for two reasons. First, the information obtained after the first step has no effect on the trust or distrust to the first distributed infographic, so the exposure is similar to the one that the survey participants will experience. Second, even though various configurations do not give a clear picture of the exposure to the infographic because every graphic is compared to the previous one, the results are able to give new insights into the research design.

Design of the focus groups suggests that focus groups should take not more than 30-45 minutes in a quiet place that is not crowded with people and located conveniently for the participants. There is a possible constraint that due to the regime's lack of freedom the respondents are not completely honest about their trust to the information on the graphs (Roller 2013, 52; Shih 2015, 20). This limitation can be mitigated by the involvement of the people whom the researcher already knows. Despite the fact that it is not advisable to have somehow acquainted participants in the focus groups due to the various reasons (Henrink et al. 2011, 149-152), the familiarity of the participants with the researcher, and possibly among themselves is not a negative side in the current research's settings. On the one hand, people would feel more comfortable speaking on political matters, on the other hand, the perception of the infographics is not a sensitive topic, and opinions can be expressed freely, regardless of the internal dynamics.

The structure of the focus groups' discussion follows the structure suggested by Hennink et al. (2011, 142-148). According to their guide, the design of the discussion should start from the broad questions, proceeding to the narrow discussion of a certain topic. The starting point is the introduction, where the moderator, who is the researcher, provides some basic information about the study, although in this case not explaining the research question in order to not undermine the impartiality of the results. Proceeding with the broad opening and introductory questions, it give the participants the taste of the groups' dynamics, the moderator can engage everyone into the discussion. After that, the transition question starts the process of narrowing down the scope of the conversation. During this stage, the infographics are distributed, and the participants are asked to look at it for one minute. Finally, key questions as "Do you believe this infographic? Why? What makes you think so?" are asked, and the process repeats from transition to the key questions to work with two more infographics. In the end, the participants are asked closing questions that are related to the concluding notes and impressions.

2.1.3 Results derived from conducted focus groups

Two focus groups consisting of 5 people each are conducted at the beginning of September in Tyumen, Russia. Tyumen is a fairly average Russian city, where the universities are not anyhow outstanding. Additionally, as it was stated before, it is more likely to get a real opinion of the people living in the authoritarian regimes when the politics related discussion is held among acquainted people, and Tyumen is the original city of the researcher.

The focus groups take place in Starbucks at the city center – the easiest point to get to in Tyumen. The place is quiet, with few people, but the music is loud enough so people around cannot hear the conversation going among the group, sitting at one square table.

The participants were found via the researcher's post on VKontakte – Russian social network very similar to Facebook. The arrangement of the focus groups was made with the usage of doodle.com – online calendar tool allowing people to choose the day and time when

they are comfortable to come and spend their time on a certain event. Hence, the participants chose the time slot suitable for them, not seeing what other participants have chosen to not make them try to choose the same time as the people they are friends with. People with the same time slots are invited to the same focus group, so its composition is not fully randomized.

One of the focus groups takes 45 minutes, while the other – 33. The time difference does not reflect any quality variance, but it rather depicts the variety in perception and discussion of the simple and complex infographics respectively. The perception of the infographic as simple set more optimistic tone of the discussion due to the fact that the participants could understand the infographic effortlessly, and they felt more confident talking about it, while the opposite trend is set by the complex infographic.

The participants represent different levels of interest to politics: starting with those who are convinced political partisan and ending with some who do not care about politics at all. Each of the focus groups contained participants with various political interests. The participants represent different majors, with no prevalence of any. In fact, each of the groups happens to have one design student, so the participants do not leave visual part undiscussed, while the moderator does not need to intentionally bring this topic.

The design of the discussion follows the principle taken from Hennink et al. and elaborated on above. The introduction briefly explains the researchers' academic interests and the reasons why the focus groups are organized, albeit there is no mentioning of the research questions and the hypotheses of the study, so the participants are not able to guess favorable answers. Additionally, the researcher sets the rules for the participants that they do not use their personal acquaintances to give frivolous answers. The rules are simple: participants are asked not to intentionally use the personal information that can be understood by only a part of the participants, as well as they are asked to actively participate in the discussion, and that I can

interfere and direct the discussion in case it is not aligned with the main topic. These rules are needed mostly due to the different level of familiarity of the participants between each other.

The broad questions are directed to the participants' background and interests. Everyone is asked to introduce themselves, so those who might be not acquainted feel more connected than if they are complete strangers. The introductory questions attempt to refer the participants to their regular exposure to the political issues that are not controlled by them directly.

After that, the moderator asks whether anyone faces the political infographics anywhere in their lives, how, why, and how often. Once the participants' mind is set on the infographics and they are fully comfortable to talk, everyone is distributed with the randomly assigned to the group type of the infographics. In the case of the first focus group it is a pro-governmental complex infographic, and for the second group – a pro-governmental simple one.

The participants have one minute to get familiar with the infographic, and then they are asked whether they find it complex or not and why. During the discussion several questions become irrelevant to ask since they are covered by the participants themselves, however, the main questions are asked in both groups. Those are *What is easy to understand and what is not? How do you think the complexity/simplicity of this graph contributes to the understanding of the depicted information? What do you think about the informative aspect? Do you believe this information? Can you highlight the strengths and weaknesses of this infographic?*

When the participants do not have anything else to add, they get the second infographic that has the same political affiliation, but different complexity. The same questions are asked again, and the comments that somehow compare the infographics are noted separately.

Finally, everyone receives the infographic with the same complexity as it was the first time, but political partisanship is different – it happens to be that these infographics are both oppositional. Certainly, the participants cannot delete the memory about the first graph, so what is important here is how easily they deny the previous information and tend to believe the last

infographic or vice versa. Unfortunately, none of the groups receive the infographic favoring political opposition in the first instance, but since the assignment of the infographics is completely random within different infographics' complexities, the interaction undermines the validity, hence not possible.

As expected, during the focus groups some of the participants lead the discussion. Focus group that considers the simple infographic in the first place is mostly led by the design student, while the group that discusses complex infographic is fairly even in terms of the leading figures. In the cases when the leading person takes over the discussion, the researcher interferes and asks the questions that involve other participants too. Luckily, no participants feel out of sorts, contributing proportionally in both discussions of the political and visual parts, explaining their reasoning behind the trust or distrust.

The findings derived from the focus groups are highly useful for following survey. First, even though the ideas for the infographics' design are taken from different popular infographics, combined with the studies related to the best infographic compositions, political information is not perceived well from them. Specifically, the simple infographics are named as complex ones, even after the comparison with the one that is designed to be complex in the first place. Additionally, the complex infographics are too complex for some of the participants, so they tend to quit the discussion or to move to a different aspect faster. These observations mean that the infographics have to be changed and become simpler. As a result, the simple infographic is now considered as complex, while for the simple one a brand-new infographic is created. This infographic includes only very simple graphs and one color.

Second, political partisanship influences the respondents' views as expected. Those who are not certain about their standings due to the lack of interest tend to believe the information on the graphs. More interestingly, none of the participants believe the pro-governmental infographics, even though some of them are politically neutral or even stand in favor of the

state's policies. However, the reasoning for that can be related to the focus group's discussions and prevailing political views that are closer to the political opposition than to the government. Fortunately, this is anticipated by the anonymous survey.

Third, when some of the participants bring the necessity of the sources to believe the information on the graph, the rest become concerned about it too, and the level of trust decreases significantly. Remarkably, the people who mention the sources are only those who study social sciences. Nonetheless, from the focus groups, it is not purely clear how the individuals' mind works when they are exposed to the graphs on their own. In case the survey has the respondents that mention the same in the comment section, it is promising to study their background information more closely.

Considering the second and third parts of the focus groups' discussion, some of the facts can be additionally derived and discussed further on the basis of the survey's results. In the case of the first group, exposure to the simple infographic after the participants have already discussed the complexity and trust to the first leads to the easier and more confident discussion in the latter case, followed by the same level of trust. The last complex oppositional infographic is trusted by some of the participants due to "higher credibility due to the complexity of the graph". It is not yet clear whether it is a result of the discussion or comparison between the infographics, but it is not what was searched for initially.

The second group receives the complex pro-governmental infographic after the first one, and they process the information rather poorly – both infographics are perceived as complex ones, and they are not well trusted. It could undermine Hypothesis 2 that assumes the higher level of trust to the complex infographics, but the sample is very small, and no result can be derived, and hypothesis cannot be rejected with certainty. Eventually, the participants are distributed with the simple oppositional infographic. Regardless of their political partisanship,

the participants tend to believe the information more, although still stressing that it is difficult to trust since the infographic is not simple enough.

All in all, the focus groups contribute to the study with valuable comments and changes, starting from the check of the comments about the sources in the survey, ending with the visual adjustments in the infographics.

2.2 *Online survey*

2.2.1 *Why survey?*

Online data collection has several significant advantages over the offline methods: decreased response time, lowered cost, bigger geographic and demographic catchment, flexibility of the survey format, and guaranteed anonymity (Granello 2004, 387). While online methods have various options, a survey is the one that captures the biggest number of people, especially if conducted via social networks or similar platforms.

A survey distributed in the social networks certainly reaches its targeted audience, and it is not perceived as a junk message as it can happen with sent via email links to the survey (Lefever, Dal, and Matthiasdottir 2007, 576). Since the participants do not get any benefit for completing the survey, they are more likely to be genuine.

The major limitations of the online survey might include weak sample representativeness, low response rate, technological difficulties, and careless respondents (Granello 2004, 388; Meade and Craig 2012, 439-440). Low response rate can be addressed by the bigger size of the targeted audience and by extension of the time when the link to the survey is posted. Careless respondents should be indeed dealt with separately by additional means. Representativeness does not significantly affect the current survey, because the survey is conducted on students who tend to use social networks more often than other age groups. Additionally, at least 76% of Russians use the Internet (World Bank 2017), and the rate of the students who are present the Web is probably even higher.

Perhaps the most serious limitation is possible technical problems that can happen to the participants of the survey, or to the survey blank itself. The former can be damaging to the sample size, in case the participants for some reason cannot access the survey, hosting platform is able to notify about such an obstacle. However, in case the error happens to the survey questions and some of them disappear or are shown incorrectly, then the design of the study should be changed if not entirely, then significantly. One can run a test launch in order to eliminate the technological problems.

2.2.2 *Design of the survey*

The survey is conducted for the main data gathering purposes. The first block of the questions obtains the information on the control and independent variables. Taking into account the particularity of the Russian political regime, namely the fact that left-right political spectrum is not well-presented in the Russian politics (Gel'man 2008, 919), the questions do not target the left-right positioning. In turn, the main questions assess to what extent the respondents support the government and the opposition. The questions ask about the level of political interest of the respondents, trust to different political news sources, level of support of the current state's politics and support of the political opposition, and whether the respondent experienced a recent change in their political views. All answers are measured on a 1-7 continuous scale.

The next part of the survey includes the treatment that involves exposure of the respondents to the randomly assigned infographic. After the participants get familiar with the infographic, they can proceed to the final question regarding their trust or distrust to the infographics they have just seen. The answers are binary – either the respondent believes the information derived from the graphs, or they do not. However, in order to more precise results, the question also has an option to leave an open response instead of binary “yes/no”. The reason for that is if the participants feel a strong opinion about the infographic, or they cannot decide

certainly whether they trust or distrust it, their point should be captured. Otherwise, the participant can quit the survey with no submission at all or answer randomly.

2.2.3 *Results derived from the survey*

The survey is first deployed in a month after the focus groups' results are obtained, and again when additional funding is received. Google Forms is chosen as a survey platform due to their wide range of the options for the adjustments of the survey, as well as the brief overview of the gathered data is convenient, as all data can be easily exported to a .csv file.

The survey takes place in VKontakte, Russian most popular social network. However, in order to promote the survey, the system of targeted advertising is used. This approach has both benefits and drawbacks. The positive side is related to a significantly higher number of people that can participate in the survey due to the fact that the researcher's post and reposts from different people cannot give the range that is accessible by the usage of the ads. The negative component is tightly connected to the benefit – when the users of the social network see the word “Advertisement” above the post, they already feel less interested in whatever is written in the post below. Nevertheless, targeted advertisements are a safe way to increase the number of participants with no validity sacrifice.

The survey was carried out on January 17 and March 7, 2019. The link to the survey was shown 62541 times with click-through rate of 2.3%. Clicking on the link does not guarantee that the person would finish the survey. The one could decide to stop filling in the form at any point of the time. In fact, 4 different surveys reached 760 respondents cumulatively. That means that around 53% of those who clicked on the link did not complete the survey.

The underlying principle of the surveys' mechanics is randomization of their URLs. Once the user clicks on the link in the advertised post, they are redirected to one of the four surveys with equal chance to get any of survey versions. Table 1 represents the number of respondents in each of the surveys.

Table 1. Distribution of the participants among the surveys

	Favoring the government	Against the government
Simple	208	193
Complex	179	180

Unfortunately, due to the technical bug, one of the surveys was missing the question that questioned the participants about their attitude towards the oppositions' rhetoric. The responses to this question that can be found in other surveys are excluded from the dataset for the sake of the unity between the survey's design. Certainly, one can claim that the participants were cognitively affected by the absence or presence of such a question in a conjunction with a similar one that addresses the attitude towards the government's politics. The response to this critique can be different. On the one hand, it is true that now the internal validity is undermined since it is unknown whether the participants experience a question's effect or its absence. In case they do, then the results of the surveys are not reliable, and it has to be conducted again. On the other hand, there is no solid ground to think that such an effect takes place. Once the participants are asked about their attitude to the government, they already think about the political agents and attitudes to them. In case the respondents have a strong political affiliation, then the question or its absence would not matter at all, because once thinking about one side of the political spectrum, the person automatically recalls their own view (Espino and Byrne 2018, 2459). Finally, speaking about those who are indifferent about politics, it is not much a difference for them to be reminded about the existence of the opposition. Nowadays Russian political life is sharply dichotomously divided, presenting the incumbents and the opposition (Gel'man 2015), therefore thinking about one side induces the thoughts about the other regardless of whether it was mentioned or not.

Preliminary analysis of the obtained data reveals not only the gender difference but also a variety in geographic representation. Unlike the survey that is conducted in real life, online

form of communication allows to go beyond the geographic boundaries. The map depicted in Figure 1 shows the geographical distribution of the participants.

As expected, Moscow and Saint Petersburg are the cities with the biggest number of survey participants – 40% of the respondents come from one of these cities. It can be plausibly explained by a higher quality of education in bigger cities of Russia, and in particular in Saint Petersburg and Moscow. Overall the distribution corresponds to the actual location of the universities in Russia.

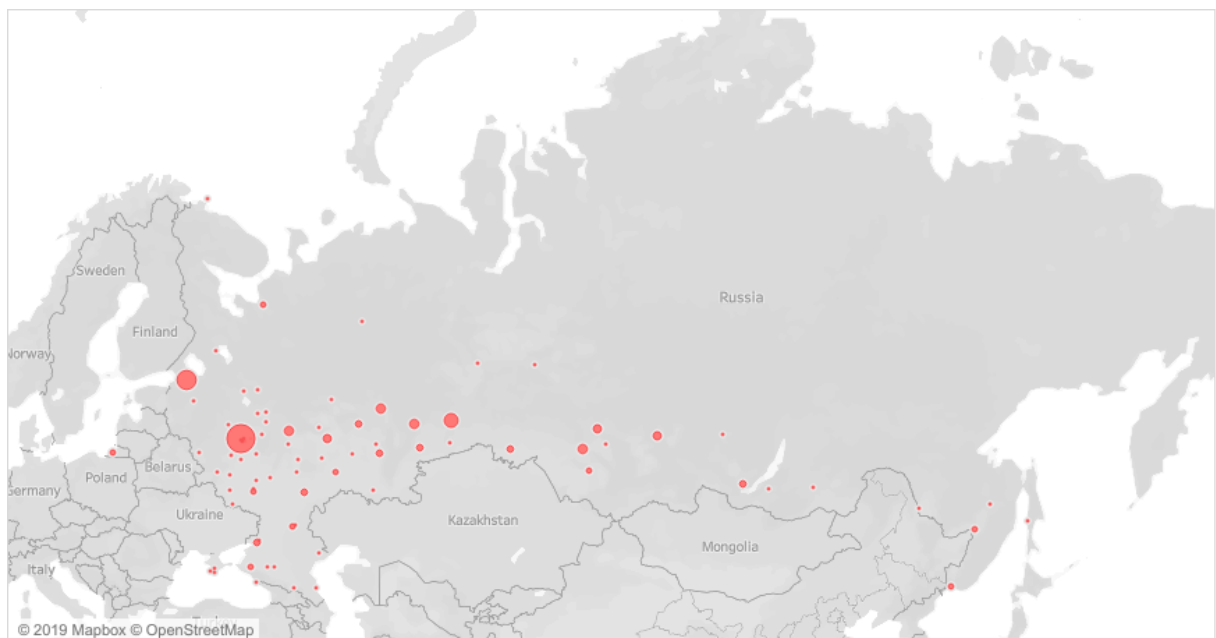


Figure 1. Geography of the participants

Since the survey suggests not only yes or no answer to the question about the trust to the infographics but also an option to leave a personalized more elaborated answer, such answers were recoded. Based on the results that were obtained from the focus groups, having an opportunity to leave a different from yes or no reply to the given final question is crucial. Otherwise, the participants tend to whether guess the socially favorable answer or just to refuse to respond. Even though less than 9% of the participants gave a different response, the very fact of having an option to reply something else except for restricted binary options gives them a

feeling of a higher amplitude of choices (Argouslidis et al. 2018, 1931). Nevertheless, to conduct quantitative analysis, the dependent variable has to be dichotomous. For this purpose, all 68 extended responses to the question about the trust were whether recoded to yes or no, or they were dropped from the survey. In the cases when participants opted for answers as “More yes, than no” or “I need more proof”, the replies were recoded as “yes” and “no” respectively. A doubt concerning the infographics is considered as mistrust in the current study, even though the participant might be able to operationalize it differently. Empty responses or the ones with impolite expressions addressed to the general survey design were omitted. After the cleaning of the data, 743 observations were left. Their distribution is shown in Table 2.

Table 2. Distribution of the participants among the surveys after the data cleaning

	Favoring the government	Against the government
Simple	204	190
Complex	173	176

Chapter 3 – Analysis of the data

3.1 Regression analysis

3.1.1 Why logistic regression?

As a method of statistical analysis, logistic regression suits the goal to test the hypotheses perfectly. Logistic regression allows one to work with the dependent dichotomous variable, as well as any regression it reveals how a change in independent variables influence the dependent one in case the former is statistically significant.

Logistic regression does not require assumptions about the distribution of predictors to be met (Tabachnick, Fidell, and Ullman 2007, 444). However, the absence of the outlying observations and no multicollinearity in the model itself are able to enhance the power of the predictors. Based on Cook's distance, the biggest outliers were dropped from each survey's models that are discussed below. Consequently, 731 observations are kept instead of the initial 743.

3.1.2 First regression models

Prior to the analysis of the data divided by the infographics that were in the surveys the observations were obtained from, all data points are joint in the same data frame in order to see what the decisive parameter for the infographics is regardless of their political affiliation and complexity.

Collected data is used in a regression model. The analysis of such models consists of several steps assuring that the results are reliable from the perspective of the fit and statistical significance.

The questions of the survey form 16 variables, only 7 of which are used in the regression model. Some of the variables, as *University*, *Sources_trusted*, *Sources_not_trusted*, are collected for the sake of making additional insights when interpreting the results, and they do not have value for the statistical analysis.

The other not used in the model variables are the ones that whether cause multicollinearity or those that decrease the overall fit of the model. For instance, *Age* and *Education stage* are highly correlated, hence only one variable should be chosen. Since the *Education stage* provides a better fit of the model, it is chosen over the *Age*. Additionally, and quite surprisingly, *Interest_to_politics* and *Political_activity* lead to a poorer fit, and they are not statistically significant neither in the regression run on the whole data, nor in the cases of the further tests. Therefore, these variables are excluded from the analysis, albeit they can be helpful for descriptive statistics and supplementary analysis.

Table 3 presents regression results and odds values for the statistically significant variables. Since logistic regression cannot be interpreted with coefficients derived from the summary of the model, the interpretation should come from the probabilities that are calculated from the odds or more accurately from the odds ratio.

Table 3. Regression results and odds for statistically significant variables (all data points)

	<i>Dependent variable</i>	
	Trust	
	Regression coefficients	Odds
Gender	0.458 (0.278)	
Education stage	-0.108 (0.578)	
Major	0.004 (0.147)	
Trust to people	0.288* (0.120)	1.721
Trust in information	0.543*** (0.147)	1.335
Attitude to government	-0.154 (0.090)	
Observations	731	

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

The odds represented in the right column of Table 3 are interpreted as probabilities. The formula for calculating the probabilities is the following (Davies, Crombie, and Tavakoli 1998, 990):

$$\frac{odds}{odds + 1}$$

Depending on whether the odds are higher or smaller than 1, the interpretation varies. When the odds are higher or equal 1, the formula is used as it is. In such a case the probability shows the chance that two variables increase their value together. For instance, if the odds are 1.786, then there is a 64% chance that an increase in the explanatory variable leads to value 1 in a dichotomous response variable.

However, when the odds are smaller than one, then an increase in the independent variable leads to 0 value of the dependent variable. Moreover, the probability derived from the odds formula should be extracted from 1 before interpreting. As an example, 0.786 would be understood as a 56% chance that an increase in explanatory variable results in a 0 value of a respondent one.

Therefore, regardless of the complexity and political affiliation of the infographics, there is a 63% and 57% chance that higher trust to people and information respectively lead to trust in the infographics. However, depending on the features of the infographics, there could be different factors that influence the one's propensity to trust the infographic.

For the sake of convenience, the models that reflect the observation obtained from each of the surveys have a short name corresponding to the infographics they were exposed to. Models that work with the simple or complex infographics have "simple" or "complex" in their name respectively. The political affiliation of the infographics is marked as "yes" and "no" in the names of the models, implying the infographics in favor and against the

government's politics respectively. The p-values from each survey's model are presented in Table 4.

Table 4. Regression results for each infographic

	Dependent variable			
	Trust			
	SIMPLE_YES	SIMPLE_NO	COMPLEX_YES	COMPLEX_NO
Gender	-0.639 (0.436)	-0.143 (0.354)	0.326 (0.459)	0.700 (0.415)
Education stage	-0.169* (0.083)	-0.107 (0.078)	-0.233* (0.108)	-0.065 (0.078)
Major	0.732*** (0.218)	-0.082 (0.186)	0.195 (0.242)	-0.083 (0.215)
Trust to people	0.271 (0.180)	0.275 (0.161)	0.288 (0.211)	0.216 (0.177)
Trust in information	-0.053 (0.205)	0.580** (0.205)	0.575* (0.258)	0.993*** (0.230)
Attitude to government	0.166 (0.126)	-0.218 (0.125)	0.176 (0.150)	-0.447*** (0.128)
Observations	204	190	173	176

* $p < 0.05$; ** $p < 0.01$, *** $p < 0.001$

Table 5. Odds for each statistically significant variable

	Dependent variable			
	Trust			
	SIMPLE_YES	SIMPLE_NO	COMPLEX_YES	COMPLEX_NO
Gender				
Education stage	0.844		0.791	
Major	2.080			
Trust to people				
Trust in information		1.786	1.778	2.701
Attitude to government				0.639
Observations	204	190	173	176

Hence, in the case of SIMPLE_YES model, there is a 68% chance that majoring in social sciences and humanities leads to the trust in the infographics, as well as later education stages lead to 54% chance in distrusting. Even though the former was not expected, but the perception of the simple infographic varied depending on its political affiliation, and major does not cause any difference in the SIMPLE_NO model. Instead, general trust in the information

on the Internet makes a difference. In particular, there is a 64% chance that higher trust to the Internet sources leads to the trust in the simple infographic that is politically against the government.

Complex negative towards the government infographic also shows statistically significant value for the “trust in information”. The tendency among the participants is the same, although the chance is slightly higher – 73%. However, in the case of COMPLEX_NO, there is a 61% chance that those who are close to the government do not trust this infographic. Interestingly, attitude to the government is not statistically significant for the COMPLEX_YES model. Additionally, the education stage slightly contributes to the change in the outcome – 56% chance the those who are in the latest stages of obtaining their degree do not trust the complex positive towards the government infographic. Finally, COMPLEX_YES reveals the same 64% chance that those who trust the information on the Internet more, trust the infographic too.

From the first glance, one can say that people tend to reply in accordance with their propensity to trust the information on the Internet, rather than with anything else. Therefore, it is unlikely that the design of the infographics or their political affiliation have an influence on the trust of the audience. However, there are some additional variables that have in effect in some models and do not have in others. The next section interprets the results in order to reject or verify the null hypotheses stated in the theoretical part of the work.

3.2 Hypothesis testing

Using the model mentioned earlier, we are able to test hypotheses 1. Test of hypothesis 2 requires additional analysis that targets the complexity of the infographic. Such analysis is supposed to compare the models and the datasets between one another, so it is not included in the first step of data analysis.

3.2.1 Hypothesis 1

One part of the first hypothesis addresses the influence of the academic discipline on the propensity to trust the infographic. The variable that is important for this hypothesis is *Major* – it is a categorical explanatory variable that has value 1 for those who study exact sciences, 2 for students of humanities, and 3 stands for social science students.

The results of the logistic regression with the chosen setting of the explanatory variables reveal that there is only one case when the participants' major made a difference. *Major* is statistically significant only in the SIMPLE_YES model. This means, that we cannot reject the null hypothesis in the case of hypothesis 1, because the effect occurred only in one model.

However, those who major in social science can have some unusual patterns in comparison with the rest. Particularly, they could be more likely to be consistent with their political partisanship, hence trust or distrust the infographics according to their political standings, and not infographics complexity.

Since *Attitude to government* is a continuous variable measuring on a 1-7 scale the proximity of respondents' political views to the ones that are translated by the government, it can be a proxy for defining to what political partisanship group one belongs. Relying on one variable without controlling for *Interest to politics* or *Political activity* can keep a data on those who could be not actual political partisans, but rather randomly, or as Meade and Craig (2012, 439-440) put it, carelessly answering individuals. Therefore, Table 6 provides a percentage of those who trusted the infographics with both with and without control for interest in politics.

Table 6. Percentage of students of different majors who trusted the infographics

	SIMPLE_YES			COMPLEX_YES			SIMPLE_NO			COMPLEX_NO		
	Without control for interest in politics											
	E	H	S	E	H	S	E	H	S	E	H	S
Not supporting the government	15	21	29	25	10	13	42	20	42	50	57	40
Indifferent	21	41	52	12	9	42	38	35	40	35	40	35
Supporting the government	0	25	25	50	0	60	38	0	0	18	20	0
	With control for interest in politics											
	E	H	S	E	H	S	E	H	S	E	H	S
Not supporting the government	17	21	27	26	8	6	46	27	50	56	64	53
Indifferent	13	40	53	13	0	30	23	30	42	13	40	36
Supporting the government	0	33	33	50	0	50	29	0	0	13	25	0

*In green is percent that is expected to high, and in red – to be low
Majors are denoted as E – exact sciences, H – humanities, S – social sciences*

Group “Not supporting the government” consists of those who chose 1 or 2 on a 7-point scale when answering a question about the *Attitude to government*. “Indifferent” are those who chose 3 or 4, and “Supporting the government” are those who opted for 5, 6, or 7. For the second part of the table that controls for the *Interest to politics*, respondents who chose 1 or 2 on a similar 7-point scale are not considered.

Based on the structure of the responses, rejection of hypothesis 1 holds. All majors show similar trends in responses, so social science students are not anything special. One can say that comparison between different majors does not provide meaningful credible insight, because as can be seen from Table 4, main influencing factor on people’s trust to the infographics is *Trust in information*. Hence, different majors can have different shapes of the distribution of replies to the question about the trust in information, meaning that comparison on the basis of a statistically irrelevant factor does not make sense. However, frequency distribution for *Trust in information* has a similar shape across all three majors.

The other part of hypothesis 1 targets the partisanship's effect. *Attitude to government* is the variable that is responsible for the test of this hypothesis. As it can be seen from the regression's results, there is only COMPLEX_NO model that reports the statistical significance. The effect of this variable is expected by the hypothesis – the respondents were relying on their partisanship in the process of making a decision to trust or not to trust the infographic.

Nevertheless, the effect is observed in only one model, hence we are not able to reject the null hypothesis. It means that there is no universal impact of the political affiliation of the audience. Instead, there can be confounding factors, which are present in one model and not in the rest. Also, as it can be seen in Table 6, political partisanship somewhat reflects the expectations. Those who favor the government tend to trust favoring infographics and vice versa. Even though the sample size for such a conclusion is very small, consideration of possible factors made in the following parts of the work provides possible explanations to this observation.

3.2.2 Hypothesis 2

Hypothesis 2 addresses the complexity of infographics. It is assumed that simple infographics cause less trust, especially among those who are politically neutral. In turn, complex infographics are supposed to be trusted more, and the same as previously, politically neutral individuals are assumed to trust more than the partisans.

To test the part about the neutrality of this hypothesis two datasets for complex and simple infographics with only politically neutral respondents are formed. It is not yet clear how to operationalize political neutrality on the basis of the existing data. There are three possible variables that could stand for political affiliation: *Interest in politics* + *Political activism*, *Attitude to government*, or a combination of *Most and Least trustworthy news sources*. Even though *Interest in politics* is the most relevant one, the other two are worth considering too.

There are many observations, that have contradicting values of the variables. For instance, some respondents tend to say that they are not interested in political information (*Most and Least trustworthy news sources*), but at the same time they state their high interest in politics (*Interest in politics*).

The most parsimonious solution is a preferable one. The neutrality is then measured by combining *Interest in politics*, and *Attitude to government*. The former variable keeps only those who answered that they are not interested in politics, hence they are fairly indifferent about the political life of the country. However, since the current level of interest in politics does not reflect political partisanship of the person. Therefore, the variable that measures the partisanship should filter for those responses that revealed a neutral attitude towards the government – 3 or 4 out of 7 on a scale that is used in this variable.

For another part of the hypothesis addressing the rest of the respondents, only merging dataset of the same infographic complexity is needed. Table 6 shows the percentage distribution of the votes depending on complexity of the infographics, and political partisanship of the respondents. It is both visible from the table and proved by a chi-square test that there is no statistically significant difference between the responses of politically neutral people.

Table 7. Percentage distribution of politically neutrals and the rest of the sample

	Infographics' layout	Trust	Distrust
Politically neutral	Simple	44 %	56 %
	Complex	40 %	60 %
The rest	Simple	29 %	71 %
	Complex	26 %	74 %

For those who are not politically, there is a strong tendency of the respondents to distrust the infographic regardless of its complexity. In turn, politically neutral respondents do not have any specific tendency to trust or distrust the infographics, rather the opposite. The distribution of their answers is almost equal disregarding some insignificant fluctuations.

The observable results lead one to the conclusion that hypothesis 3 should be rejected. Simple infographics do not cause less trust, while complex ones are not more credible either. However, the discrepancy in the distribution between these subsets can be explained by the absence of political interest and consistent opinions of the disinterested group, hence less predictable results. To uncover the factors that might be influencing the trust to the infographics, additional logistic regression models are run on the datasets presented in Table 6.

Table 8. Regression results for combined by complexity datasets

	Dependent variable					
	Trust					
	Politically neutral		The rest		All	
	SIMPLE	COMPLEX	SIMPLE	COMPLEX	SIMPLE	COMPLEX
Gender	0.482 (0.755)	-2.393 (1.847)	-0.495 (0.289)	0.713* (0.303)	-0.412 (0.262)	0.466 (0.281)
Education stage	-0.487** (0.172)	-0.157 (0.203)	-0.104 (0.060)	-0.112 (0.062)	-0.132* (0.053)	-0.101 (0.057)
Major	0.873 (0.682)	-1.039 (0.765)	0.163 (0.259)	0.260 (0.278)	0.214 (0.230)	0.095 (0.251)
Trust to people	0.479 (0.383)	0.542 (0.343)	0.097 (0.121)	0.323* (0.137)	0.178 (0.110)	0.254* (0.119)
Trust in information	-0.182 (0.397)	0.497 (0.406)	0.403* (0.158)	0.539** (0.164)	0.193 (0.133)	0.510*** (0.145)
Attitude to government			-0.059 (0.092)	-0.152 (0.097)	-0.006 (0.083)	-0.158 (0.090)
Observations	61	44	333	305	397	352

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

Table 7 presents the results of regression analysis. Politically neutral respondents do not have the *Attitude to government* included in the model since it was a filtering criterion for the corresponding subsets. For the sake of comparison, the model is run on the full datasets too. While it is difficult to draw a conclusion on the basis of the small samples of the models containing data on politically neutral respondents, the other two subsets can be interpreted more confidently.

From the first glance, it is evident that politically neutral respondents make a difference for the results of the regression analysis. When the sample does not include politically neutral respondents, trust to the simple infographics' changes with trust in information, rather than with the education stage. However, when the model is run on the undivided samples, the same effect as derived from the test on politically neutral respondents holds. Respondents that were distributed with the complex infographics do not experience influence of gender if the whole sample is considered, whereas when the subset excludes politically neutral people, gender has an impact.

Table 9. Odds for each statistically significant variable presented in Table 8

	Dependent variable					
	Trust					
	Politically neutral		The rest		All	
	SIMPLE	COMPLEX	SIMPLE	COMPLEX	SIMPLE	COMPLEX
Gender				2.041		
Education stage	0.614				0.876	
Major						
Trust to people				1.382		1.289
Trust in			1.497	1.714		1.665
information						
Attitude to	-	-				
government						
Observations	61	44	333	305	397	352

On the basis of the odds presented in Table 8, both of the bigger datasets including observations on not politically neutral respondents, trust in information has the same effect regardless of the complexity of the infographics. In particular, there is a 59% and 63% chance for those not indifferent about politics who were exposed to simple and complex infographics respectively to trust the infographics if they easily trust the information on the Internet. Additionally, complex infographics show that gender and trust to people are important factors too with 67% and 58% chance to trust the infographics if one is a female and easily trust people respectively.

This can mean that politically neutral people should be targeted by political infographics separately or depending on the goal probably not targeted at all. In the case of not neutral respondents, their behavior is more predictable, even though strikingly it is not influenced by their partisanship.

3.3 *Tree-based methods*

Tree-based methods are supervised machine learning technique used for regression if the predicted variable is continuous, or for classification in a case when the dependent variable is categorical. These methods attempt to segment the space of explanatory variables into several areas handled with partitioning classifiers (Buntine 1992, 63).

Taking into account that trust to infographics is a dichotomous variable, classification trees are built. The tree-based method is able to provide deeper insights before introducing theoretical explanations of the findings. While the mechanism is very similar to logistic regression, decision tree provides more intuitive interpretation of the most important variables by placing them on top of the tree, as well as the branches of the tree give better understanding of the influencing parameters by gradually narrowing down the features of the respondents (Rudd et al. 5, 2017). Additionally, decision trees mirror the human decision-making process, hence it is more useful when it comes to recommendations and suggestions (James et al. 2013, 330).

However, according to James et al. (2013, 331), tree-based methods carry two important disadvantages. First is a relative weakness of predictive accuracy than generalized linear regressions, such as the logistic one used as the main analysis technique above. Secondly, decision trees can be highly non-robust, meaning that even small changes in the data used for training the model are able to cause significant changes in the tree structure.

The former limitation is addressed by using logistic regression and classification tree together for deeper insights, rather than separately with a goal to choose a better model. The

latter disadvantage of tree-based methods is diminished by using the datasets with no outliers that were discovered during the first runs of logistic regression models.

I run classification trees on four datasets that are divided by political partisanship and infographics' layout complexity, and on two datasets that group respondents on the basis of complexity of the image. I keep the same explanatory variables that are used in logistic regression models. Based on the recommendations of various researchers on ResearchGate, 70% of the datasets are used for training the model, while remaining 30% - for testing it (ResearchGate 2016).

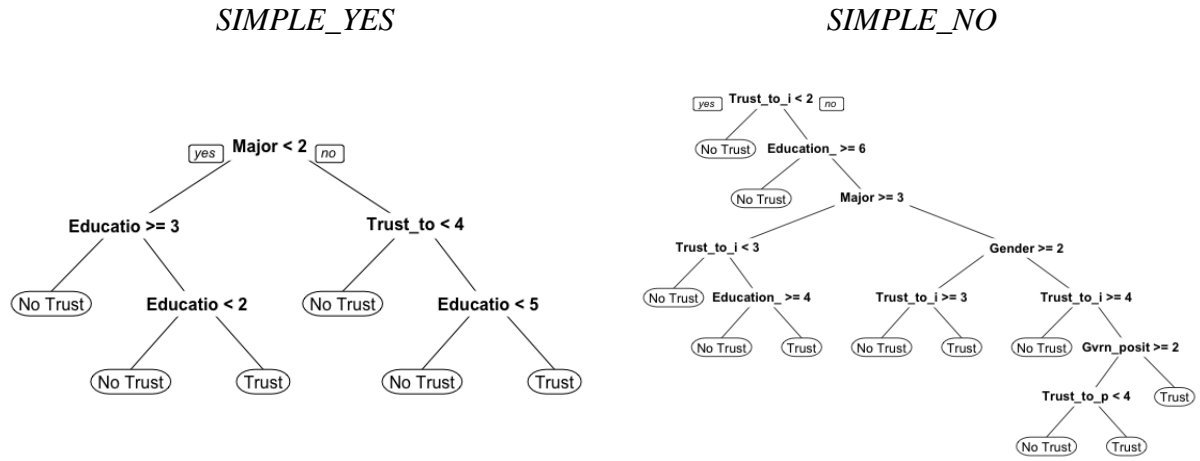


Figure 2. Classification trees for simple infographics

As it is seen on both of the decision trees in Figure 2, all statistically significant variables that were discovered as a result of logistic regression models are on top of the trees. In the case of SIMPLE_YES, it is *Major* and *Education stage*, whereas for SIMPLE_NO it is only *Trust in information*. Unlike regression analysis, the tree-based method shows all the steps that *can be helpful for classification*.

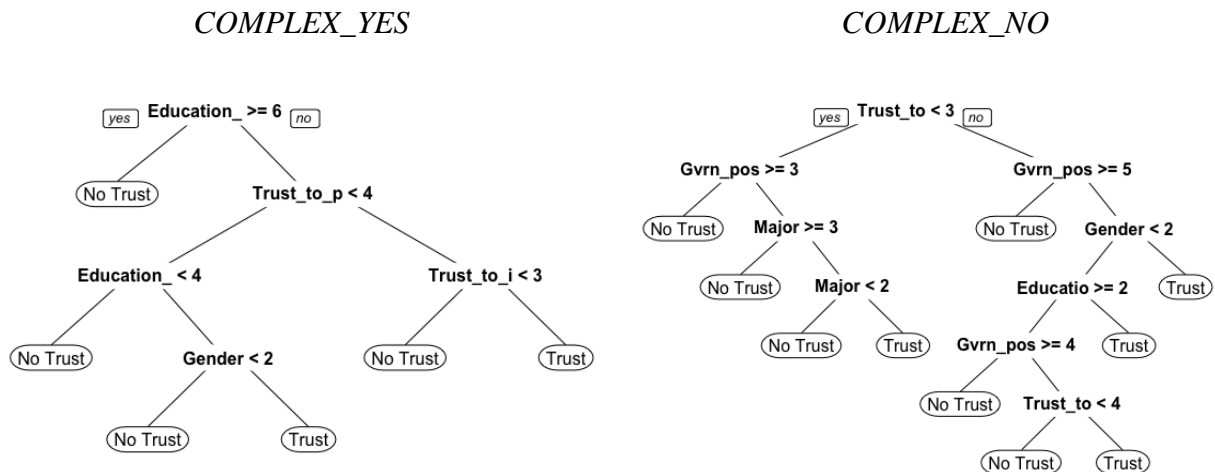


Figure 3. Classification trees for complex infographics

Same as in the case with trees for simple infographics, complex ones have statistically significant variables at their roots: *Education stage* and *Trust in information* for COMPLEX_YES and *Trust in information* and *Attitude to government* for COMPLEX_NO. Interestingly, while models look nothing alike if one compare trees within simple, and complex infographics group, a juxtaposition of the models with the same political affiliation of the infographics highlights the similarities. Even though these similarities have different importance for different trees, the thresholds of their predictions are the same, especially for infographics presenting information against the government.

For instance, in both SIMPLE_NO and COMPLEX_NO trees *Major* plays an important role. In the former model, it is a dividing factor, separating social science students and defining for them a different list of important criteria with different cutting lines. The latter model uses the same variable for narrowing down the spectrum of one's responses.

In the case of favoring the government infographics, most resembling variable is *Education stage* that appears more than ones. Having different thresholds, stage of education might be not the most decisive factor for both models, it is certainly influential enough to narrow down the choice set for the participants. Certainly, all of the models have their own

preceding parameters that are confounding factors in the real-world situation, albeit such similarities should be considered separately.

Additional observation on decision trees can be made by looking at the visualizations of the trees. Evidently, the factors that drive people's decision to trust or not to trust the infographics that do not favor the government are much more complex than the ones that are important for the opposite infographics. It is unclear whether COMPLEX_NO and SIMPLE_NO classification trees are overfitting models, although they use the same 70/30 proportion for training and testing as the other two models. To better understand the usability of the models, they are tested on the observations that are not used in the training dataset.

Table 10. Prediction accuracy of the classification trees

	SIMPLE_YES	SIMPLE_NO	COMPLEX_YES	COMPLEX_NO
Prediction accuracy	72%	63%	77%	70%
Observations	61	57	52	53

Table 10 presents that on average trees have a 70% chance to correctly predict respondents' decision to trust or not to trust the infographics. While these models can be further modified and improved by pruning or running random forest algorithms, their current performance is satisfactory enough to allow us to move to address the limitations of the analysis that was already done.

3.4 Limitations

Certainly, no data gathering and analysis are flawless. Each step has its own limitations that have implications for the whole study. In order to understand the generalizability of the work better, it is vital to examine and address the limitations with the suggestions for further improvement.

One of the first fundamental limitations come from the data gathering process. There is a fairly drastic gender disbalance among the respondents since more than 70% of the participants are women. This skews the sample a lot, decreasing the external validity of the study.

However, the web-link to the survey was shown to an equal number of men and women, but evidently, females participated in the survey more actively. The only thing that could be done is the change in the settings of the ad, in particular – increased ad demonstration rate for men. Nonetheless, this would deprive the survey of randomization because we would create a certain selection procedure that hinders our capacity to generalize to the bigger population. Since we are not interested in generalization to men only, randomization is kept. More than that, the evidence that depict women as the group with much higher survey response rate can tell us something about the audience's behavior and attention, which can be explored in the studies with a different research scope.

Another point that can be made about the sample is the size of the subset of politically neutral respondents. Their cumulative number is 108 and it is even smaller after data cleaning – 105. When the sample is divided by the infographics' complexity, subsets have 61 and 44 observations for simplex and complex infographics respectively. Such a small number of politically neutrally respondents can be overcome by whether defining political neutrality differently or by continuing data gathering. However, since not more than 15% of the respondents are politically neutral, it provides a ground for an assumption that Russian students tend to have an opinion and/or political interest about what is happening in their country, contradicting the survey's results conducted on a general population (Levada-Center 2017).

Additionally, due to the features of the advertising in VKontakte, only administrator of a public page or a group can post an advertisement. The only group that I have access to as an administrator is named "Educational Emigration". The naming of this group could lead the

audience to think that the survey looks forward to those who oppose the government. Therefore, the respondents could opt for as they assume socially preferable options (Meade and Craig 2012, 438). Moreover, it could lead to the skew in political partisanship representation, since supporters of the government could be repelled by the group's name that implies emigration from Russia.

Speaking about the operationalization of trust, this study does not control for what people think the trust is. When the respondents are asked "Do you trust this infographic?", they can think about any variation of trust, which is not necessarily is the same for everyone. Hence, we might be misinterpreting the results, labeling "trust" in accordance with our perception.

To overcome this limitation, the notion of trust should be explained. However, since the study addresses rather a reaction than a thoughtful process of thinking, it is excessive to provide the explanation of what exactly the participants are expected to think about trust. This is a trade-off, and this study opts for the more parsimonious model of interaction with the participants. At the end of the day, people's own operationalization of trust is more crucial than the unified academic version of it. In the end of the day, own perception of "trust" is the one they refer to once exposed to the infographic.

Similar operationalization issue could happen with the question about one's attitudes towards the government. Yet in this case, the continuous measurement is able to catch the variation much easier, so the problem is less likely to occur.

Finally, there is no control for how much time the participants spent on the survey and on the infographic in particular. While some could reply in seconds, nobody was limited in time and they all were able to spend quite some time on the consideration or even search for the proofs. Unfortunately, here we can only assume that the respondents were not that much engaged in the topic and the survey in general, so they did not consider checking the information in other sources or take a long time to think before their reply.

Chapter 4– Interpretation of the results

4.1 Results of the hypotheses test

4.1.1 Hypothesis 1

The first hypothesis assumes that political partisanship leads people to be consistent with their trust in political information and majoring in social sciences leads to an even stronger relationship.

As derived from the regression results, political partisanship is statistically significant only in the case of those who were exposed to the complex hostile towards the incumbent infographic. Hence, the second hypothesis is rejected, and there is no effect of the political partisanship on one's propensity to trust.

Nevertheless, it is worth considering the case of COMPLEX_NO, where according to the odds there is a 61% chance that one does not trust the infographic if they are loyal to the existing government. However, unlike SIMPLE_YES discussed above, trust to this infographic also relied on trust in information, meaning the case is not entirely deviant since respondents were influenced by the same factor that is statistically significant in 3 out of 4 models.

One of the possible explanations is that those who favor the government are more consistent with their political views when it comes to processing and trusting the information that is presented on the charts. Distrusting one type of infographics does not automatically lead to the trust of the opposite ones. In such a case those who favor the government can be perceived as skeptical and not trusting complex information that goes against their political standings, yet it does not anyhow address trust to the more politically pleasant information.

The evidence from the literature cannot directly support or refuse such an explanation. The extent of trust to political information varies depending on the country (Fletcher and Park 2017, 1296), and there is a lack of studies conducted on a Russian case to provide meaningful insight on the propensity of different partisans to trust the online sources of political

information. Further studies can investigate whether the opposition and government supporters tend to trust the information differently as in the case of the Republicans and the US media (Lee 2005, 43).

Regarding the academic major, evidence obtained from the data and presented in Table 6 suggests that major does not have an impact on one's trust to the infographics.

In fact, the survey that exposed its participants to the simple infographic favoring the government suggests quite unexpected tendency of social science and humanities students to show a 68% chance to trust the infographics regardless of their political standings. This could mean, that very simple infographic that obviously favors the government does not “pass” the education test. While the political message of the infographic is easily delivered by visual simplicity, the charts themselves could be more critically evaluated by those who major in exact sciences. Students of hard subjects tend to spend more time studying, reading the learning materials, and preparing for the classes in general (Statista 2011). Such students could focus on the evaluate the charts stricter and doubt at their credibility more. However, it is unclear why such an effect holds only in case of the simple infographic favoring the government and nowhere else.

Additionally, the reason behind the absence of the effect can be rooted in possible lack of high-quality education in social sciences and humanities in Russia. According to the QS University Rankings, only four or nine Russian universities are in top 500 for “Politics and International Studies” and “Social Sciences” respectively (QS World University Rankings 2019). On the contrary, thirteen universities in “Engineering and Technology” and in “Natural Science” are in the same range ranking, including regional universities outside of Moscow and Saint Petersburg. Possibly it could imply that majoring in social sciences provides relatively weak knowledge, hence diminishing the distinguishing features of this field of studies.

4.1.2 Hypothesis 2

Summarized in Table 7 distribution of those respondents who trusted or distrusted the infographics depending on whether they are politically neutral reveals that the third hypothesis cannot be accepted. Indeed, there is a difference between the inclination of politically neutral respondents to trust or distrust the infographics from those who are not neutral, although such a difference is distinct from expected.

In particular, politically neutral respondents tend to gravitate around the equal share in the distribution of those who trust or do not trust the infographics regardless of the complexity of the image. For those who are not neutral, the proportion is closer to 70/30, where 70% are those who do not trust the infographics. On the one hand, it confirms that politically neutral respondents tend to trust the complex layout more. On the other hand, it is possibly connected to the entirely different reasoning to trust the information rather than the complexity of the images.

Politically neutral respondents can be more prone to trust the political infographics due to their lack of skepticism in political information. Since they do not have firm standings, whether being strongly in favor or in opposition to the government, this group of respondents believes presented information easier. (Taber and Lodge 2006, 765)

Another possible reason is careless answering when respondents answer almost randomly (Meade and Craig 2012, 439-440). This can be overcome by interviewing those who are defined as careless respondents, or more technically with even-odd consistency or multivariate outlier analysis (Meade and Craig 2012, 453). The current study does not implement any of the methods that could identify the careless answers, but further research can be conducted on the same dataset, and hypothesis 3 could be revisited.

4.2 *Trust in information as a decisive factor*

Individual's tendency to trust the information in general is the parameter that is statistically significant in every model except for the SIMPLE_YES, where the behavior of the participants is influenced by very different factors. Looking at the tree model for the same infographic, it is clear that trust in information becomes important for those who study humanities or social sciences, while it is irrelevant for students majoring in exact subjects. Even though trust in information is not statistically significant in the logistic model, slicing shown by classification tree highlights that this variable has a certain degree of power. Prediction accuracy of SIMPLE_YES decision tree is 72%, so trust in information can be considered if not a decisive factor, but important when one looks closely at the observations and attempts to accurately forecast respondents' choice.

It is not surprising that trust in information has predictive power over whether a person trusts the infographics or not. Infographic is a graphical depiction of the information, and it is a matter of the strength of the political bias one has. One can be blinded by their political beliefs and trust the information on the charts without addressing own skepticism to the information in general. Apparently, it is not the case for university students in Russia. Regardless of the complexity and political affiliation of the infographics, respondents rely on their personal trust in information.

However, trust in information is a driving force for those who are neutral to politics and political actors. Table 8 illustrates that regression models conducted on politically neutral respondents do not show statistical significance of Trust in information. Capella (2002) highlights the importance of personal cynicism that underlies the trust to government or politicians. Possibly, it similar to personal trust in information, which indeed can be the most important factor to those who are not indifferent towards politics.

Additionally, the decision trees show us that the structure of the models built on the observation corresponding to the negative towards the government position, SIMPLE_NO and COMPLEX_NO are much more complex in their structure than SIMPLE_YES and COMPLEX_YES. Both negative towards the government models start with the trust in information, meaning that it is the most important parameter for slicing the observation. It is not the case even for COMPLEX_YES model that has *Trust in information* statistically significant in the regression model.

Reliance on trust in information and more nuanced division of the group of those who trust or distrust the negative towards the incumbent infographics can signify that such information is evaluated more critically than the other. Similar to the what can be discovered in the US politics (Watts et al. 1999, Lee 2005, Lee 2010), one side of the political actors can try to undermine people's trust to the information sources in Russia too. Pro-governmental sources consistently discredit people and media that are so-called "anti-Russian" (Federal News Agency 2019), and opposition leader's name is not mentioned in news at all, and those who talk about him on the federal TV channels are punished (Meduza 2018b).

The government's attempts to undermine the credibility of the oppositional information sources is not senseless. Evidence from the study of Enikolopov, Petrova, and Zhuravskaya (2011) suggest that the probability of voting for the independent party in parliamentary elections of 1999 increased when one watched independent TV channels. Understanding the importance of being the most attractive source of information, state media mixes truth with inflated numbers, or conscious disregard of certain facts (Gehlbach 2010, 82). Since the government media has a much bigger budget and coverage across the country, it is more feasible for them to address every media channel. Hence, people are more used to pro-governmental materials, and fewer parameters are needed to identify who would trust such

information. It can be tested in the next studies that would use the information on the most trusted and distrusted sources collected by already conducted surveys.

4.3 Possible explanatory variables

Finally, there could be other explanatory parameters driving one's responses. For instance, control for group membership could reveal a confounding factor clarifying why one is more skeptical towards the information, and the other is less. According to Gunther *"membership in political, religious, ethnic, or other social groups carries with it attitudes, beliefs, and a personal stake in group concerns"* (1992, 152). Since Russia is a highly demographically diverse country, group membership can become an identifying factor that further influences the propensity to trust to the information presented on the Internet (Golan and Day 2010; Criado et al. 2015).

The most trusted channel of information can be a confounding factor too. Research conducted by Kioussis (2001) reveals that based on the results of the survey that was hold in Austin, Texas, television, newspapers, and online news are ranked differently by the consumers in terms of trustworthiness. In case a person rates offline sources of information significantly higher than online ones, then it can speak for their political exposure since newspapers and TV channels are almost entirely controlled by the state (Freedom House 2017).

Economic conditions can be an important explanatory variable too. Lee (2010) finds that economic performance is important for USA voters when they are asked about trust in the government. Level of political cynicism is negatively correlated with the economic development of the country, so it can become a more important parameter than the attitude towards the government as such.

From the perspective of infographics content, and possibly the most important, the absence of the sources of information could cause the distortion of the results. While it is not common for the infographics to omit the source name nowadays, it was important for the

current study to address the perception of the infographics depending on both complexity and political affiliation, and not just the latter. In case the sources would be included, one could rely on their credibility, and not consider the complexity of the layout. Besides, the infographics contain fictional information for the sake of complete symmetry of the message, hence it was not possible to include the sources without lying to the respondents.

4.4 Future research

Due to the fact that the survey has data that was not used in this study, the data can be examined in further study. In particular, the variables Most and Least trustworthy news sources can support analysis of people's media preference or overview of the Russian media affiliation. Considering recent report of the Federal News Agency (2019) that radically names certain news sources "anti-Russian", it is prominent to identify whether the audience sees "anti-Russian" and "pro-Russian" media the same way.

Named above possible explanatory variables could be included in future research too. In case the survey is able to collect more observations, not four but eight infographics could be used for the testing, where additional four would be the ones with the source of information mentioned. A bigger sample would make it possible to include different social groups and not only university students.

Study of the Russian news sources and their affiliation, as well as research conducted with bigger sample and range of variables can contribute to the field of studies on trust, infographics, and Russian media environment. Moreover, it will provide a basis for a more comprehensive interpretation of the current results and allow to revisit refused hypotheses.

Conclusion

The intersection of trust, visual representation of the information, and political partisanship is a fairly new yet prominent field. Answering the question of why political infographics are distrusted by some people and trusted by others, one can contribute to the field with findings on driving trust to infographics factors.

Two hypotheses constructed around the research question reflect the expectations that are found true in most studies conducted on various media channels. First of them claim that being politically partisan leads to the trust in the infographics favoring the same positions, while majoring in social science increases this consistency. The second hypothesis states that a simple layout of the infographics invokes less trust, especially among politically neutral respondents.

Four infographics that vary in complexity and political affiliation were used during the focus groups to evaluate how students perceive these infographics, and whether they understand them as intended by the research design.

Changed in accordance with the focus groups insights infographics were used in the online survey, where participants answered questions that are further used as a control, explanatory, and response variable. Then they were exposed to the infographic and asked whether they trust it or not. Gathered data is analyzed by logistic regression and classification trees. Analysis of the survey data revealed that none of the null hypotheses can be rejected. There is no consistent effect of academic major, political partisanship, or complexity of the infographic's layout on one's propensity to trust the infographics. It is possible that trust to different infographics relies on more general trust in information rather than political partisanship or the layout of the infographic itself.

Indeed, the evidence highlights the significance of the trust in information in every model with one exception in case of the model with simple infographic favoring the government. This requires further investigation, and future research can address that. Together

with a bigger sample size and additional explanatory variables, later studies can overcome the limitations present here.

Certainly, it is possible that there is simply no effect of the partisanship, academic major, and infographic's complexity on the trust in this infographic. Then infographics can be treated as a completely different type of information source still requiring further research to confirm their peculiarity.

Complex infographics

Infographic 1. Political affiliation – against the government

Здоровы ли мы: насколько ухудшилось **здоровоохранение** за последние года?

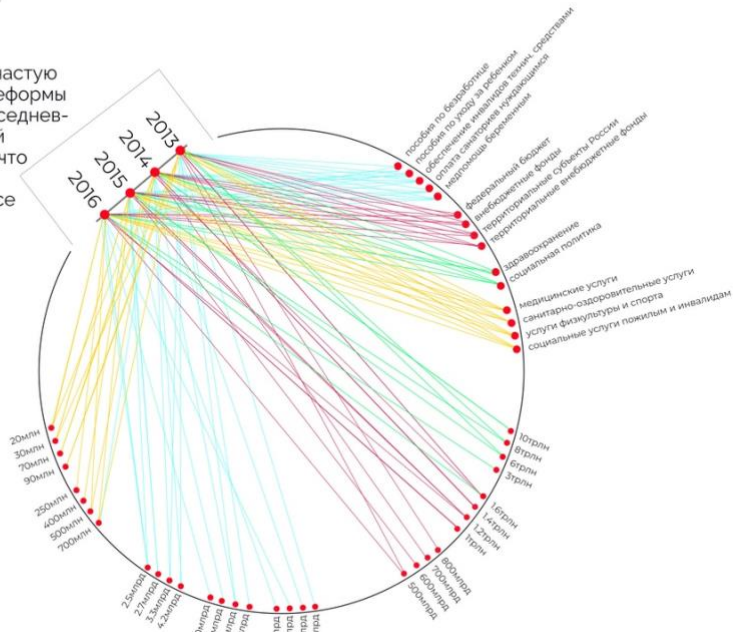
Финансирование здравоохранения зачастую не так понятно обычным гражданам. Реформы происходят достаточно редко, а в повседневной жизни мы можем не видеть полной картины. Тем не менее, это не значит, что изменений не происходит – денег в сфере здравоохранения становится все меньше и меньше с каждым годом.

Финансирование:

- ОМС
- Бюджет

Расходы:

- Бюджет
- Платные услуги населению



Infographic 2. Political affiliation – in favor of the government

Здоровы как никогда: насколько улучшилось **здоровоохранение** за последние года?

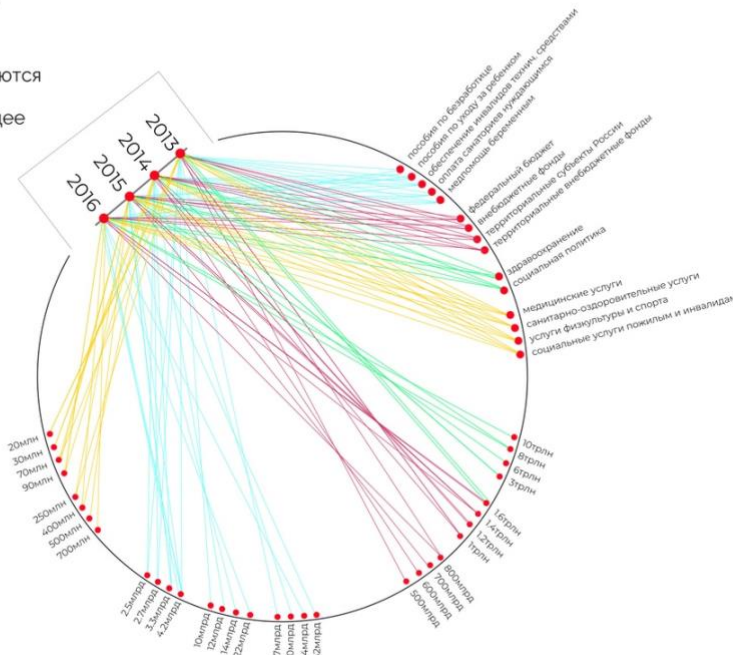
Реформы здравоохранения часто остаются без внимания, поскольку не вносят радикальных изменений в существующее законодательство. Тем не менее, это не значит, что ничего не меняется – государство активно работает над улучшением сферы здравоохранения, и достигает значительных успехов.

Финансирование:

- ОМС
- Бюджет

Расходы:

- Бюджет
- Платные услуги населению



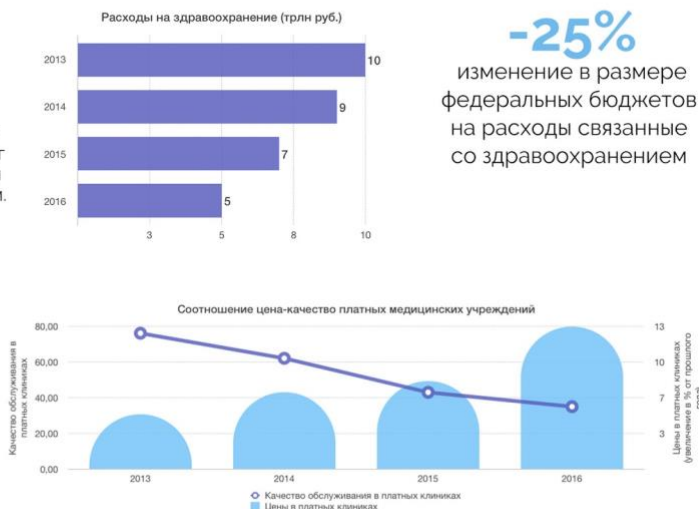
Appendix B. Infographics used in the survey

Simple infographics

Infographic 1. Political affiliation – against the government

Здоровы ли мы: насколько ухудшилось **здравоохранение** за последние года?

Финансирование здравоохранения зачастую не так понятно обычным гражданам. Реформы происходят достаточно редко, а в повседневной жизни мы можем не видеть полной картины. Тем не менее, это не значит, что изменений не происходит - денег в сфере здравоохранения становится все меньше и меньше с каждым годом.

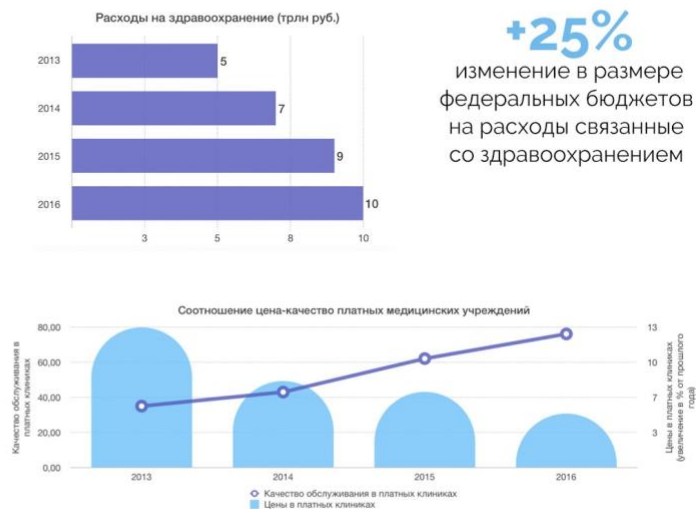


На графике представлены изменения в финансировании здравоохранения за период 2013-2016 гг.

Infographic 2. Political affiliation – in favor of the government

Здоровы как никогда: насколько улучшилось **здравоохранение** за последние года?

Реформы здравоохранения часто остаются без внимания, поскольку не вносят радикальных изменений в существующее законодательство. Тем не менее, это не значит, что ничего не меняется - государство активно работает над улучшением сферы здравоохранения и достигает значительных успехов.



На графике представлены изменения в финансировании здравоохранения за период 2013-2016 гг.

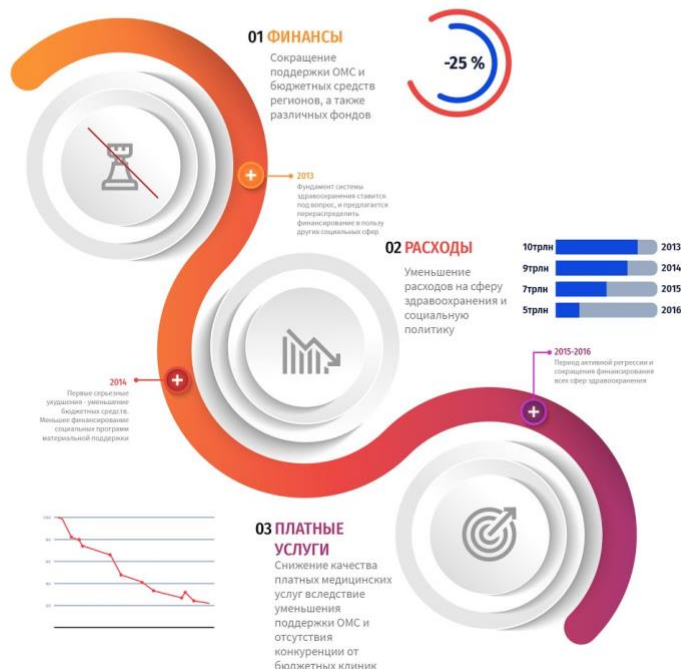
Complex infographics

Infographic 1. Political affiliation – against the government

Здоровы ли мы: насколько ухудшилось **здравоохранение** за последние года?

Финансирование здравоохранения зачастую не так понятно обычным гражданам. Реформы происходят достаточно редко, а в повседневной жизни мы можем не видеть полной картины. Тем не менее, это не значит, что изменений не происходит – денег в сфере здравоохранения становится все меньше и меньше с каждым годом.

На графике представлены изменения в финансировании здравоохранения за период 2013-2016 годов.

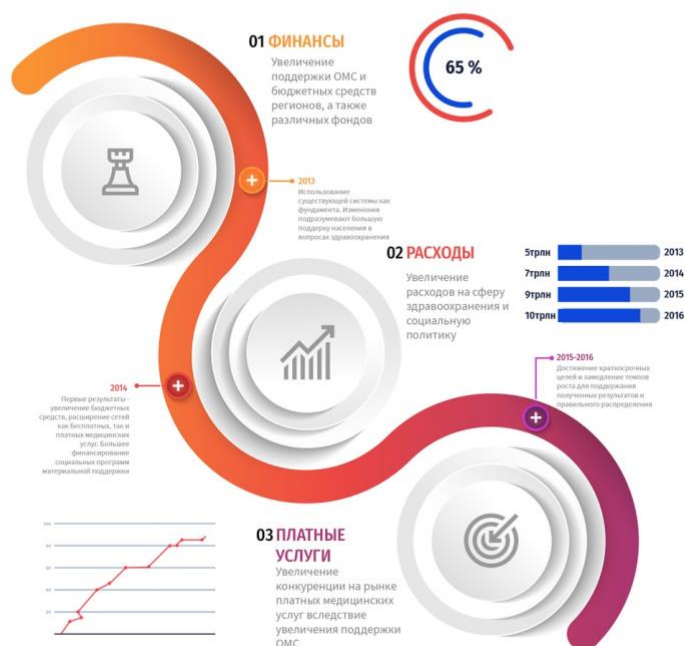


Infographic 2. Political affiliation – in favor of the government

Здоровы как никогда: насколько улучшилось **здравоохранение** за последние года?

Реформы здравоохранения часто остаются без внимания, поскольку не вносят радикальных изменений в существующее законодательство. Тем не менее, это не значит, что ничего не меняется – государство активно работает над улучшением сферы здравоохранения, и достигает значительных успехов.

На графике представлены изменения в финансировании здравоохранения за период 2013-2016 гг.



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