SELF-SELECTION AND GOOD GOVERNANCE

A thesis presented
by

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Abstract

In this paper we explore how self-selection in the job market affects outcomes in the public sector. We utilize the self-selection model to focus on the choices of individuals between public sector and private sector employment. These choices depend on observable and unobservable characteristics. One of the implications of the self-selection model is that the unobservable characteristics are not randomly distributed in the private and public sectors. These affect outcomes in developing countries, and we specifically focus on the case of anti-corruption policies in Kazakhstan – a country that consistently ranks highly in corruption scores despite the numerous attempts in policy. One of the reasons why anti-corruption policies/strategies fail in the case of Kazakhstan, is not because they are improperly drafted or implemented, but because they fail to take into account the self-selection problem. We find evidence for self-selection into public sector by subjects who are more likely to cheat in a dice task game. Secondly, altruism has no significant correlation with public sector career choices but negative correlation with the corruption. More importantly we find that the correlation between altruism and honest behavior is more likely to be due to framing effects.

Dedication

I dedicate this thesis to my parents Samat Ashikbayev and Aigul Toxanova as well as my little sister Julia. I hope that this achievement will complete the dream that you had for me all those many years ago when you chose to give me the best education you could.

Declaration

I, Zhanar Ashikbayeva, hereby declare that the thesis entitled **SELF-SELECTION AND GOOD GOVERNANCE** is an original report of my research work, has been written by me and has not been submitted for any previous degree. Wherever contributions of others are involved, every effort is made to indicate this clearly, with due reference to the literature, and acknowledgement of collaborative research and discussions. The work was done under the guidance of Professor Omer F. Baris, at the Graduate School of Public Policy of Nazarbayev University.

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Chapter 1

Introduction

Differences in specific preferences and set of characteristics affect public-private employment choices. Government organizations are associated with bureaucracy that prove to be less efficient than private enterprises that are more pragmatic, output setting oriented (Finan et al. 2015). In this study, we examine how self-selection affects the outcomes in public sector. We utilize the self-selection model to focus on the employment choices of individuals between public sector and private sector. Specifically we utilize the self-selection model (Roy 1951) to see how self-selection affects public sector outcomes in developing countries specifically in the case of Kazakhstan – a country that consistently ranks high in corruption scores despite numerous changes in policy. The government of Kazakhstan has long recognized the challenge of corruption (Janenova and Knox 2019) and initiated the laws "On combating corruption" [1] [2] [3] three times since its independence. Despite the introduction of these laws on fighting corruption nepotism, protectionism and cronyism are still flourishing in Kazakhstan (Janenova and Knox 2019). After Kazakhstan was ranked at the highest score, 150, in Corruption Perception Index in 2007, it dropped to 105 in 2010 and has increased again to 140 in 2013. The

[1] Decree of the President of the Republic of Kazakhstan dated March 17, 1992 No. 684 "Combating Organized Crime and Corruption" (as amended on 08.08.1995)

[2] The Law of the Republic of Kazakhstan dated July 2, 1998 No. 267-I. "About the fight against corruption" (as amended and supplemented as of December 29, 2014)

[3] The Law of the Republic of Kazakhstan dated November 18, 2015 No. 410-V "On Combating Corruption" (as amended on 01.01.2020)

latest update of the Corruption Perception Index in 2021 ranks Kazakhstan with a score of 102 our of 180 [4]. The scores on CPI have not improved much, have even increased instead, despite repeated attempts through special policy changes and attempts to curb corruption.

Why do we not see any responses to policy interventions? Was it because of poor implementation or was it due to bad design? To understand whether the failure of anti-corruption programs is due to inappropriate theoretical foundations that underscore its design (Marquette and Peiffer 2015) or the poor implementation of the chosen policies; self-selection in the public sector may provide us with critical clues.

The literature made clear that corrupt transactions yield unreliable inspections and monitoring, and intensive waste of resources in the public sector (Baris and Pelizzo 2020). This problem arises from the interaction of two factors: first, corrupt countries yield corrupt data and, second, in corrupt countries it is not unlikely for anti-corruption agencies to be corrupt (Pelizzo and Stapenhurst 2014).

By analyzing the impact of self-selection on public sector outcomes, we can shed some light on whether corruption persists because anti-corruption policies are inadequately implemented or whether because they fail to address the root causes of corruption. The point is relevant and important since corruption is known to have a detrimental impact on the economy and since countries, including Kazakhstan, have long attempted to reduce the spread and the incidence of corruption.

Private and public sectors are different in identifying and distinguishing ability, talent and productivity of their employees. Some of the individual's skillset and talent are observable and some of them are not. In the private sector wages depend on productivity and job performance. Firms pay higher wages to productive workers by creating a direct link between wages and some observable and measurable output. In this process productivity becomes an *observable characteristics*. By

[4] https://www.transparency.org/en/countries/kazakhstan

contrast the public sector, especially in developing countries, is not as good in identifying and rewarding productivity. Government organizations are known to be less efficient than the private sector.

We focus on three types of benefits for the individuals working in private and public sectors: contractual monetary benefits–such as official wages, undocumented monetary benefits—such as bribes and embezzlement, and undocumented non-monetary benefits such as pro-social satisfaction and status. We do not know whether more corrupt individuals predominantly choose to work for the private sector or the public sector. What we know is that both productivity outcomes are different and wage structure is different between the private and public sectors. How does this process read and feed outcomes in the public sector?

The choice of individuals to work for government is not random. They need skills for each occupation, and these skills are not necessarily substitutes or complements to each other. Pro-social motivation and embezzlement are *unobservable characteristics* both in public and private sector. It will not be possible to collect data through surveys. Hence, our concern is not trying to find data on unobservable characteristics of individuals but looking at the implications of the self-selection model. For example, if a high-skilled individual claims to be pro-socially motivated and if we find this person is also working for the private sector, we need to ask why? Either this person is honest but the amount of non-monetary benefits the public sector are inadequate that they fail to satisfy pro-social preferences and motivation, or this individual may not have genuine pro-social preferences. Both cases are possible. These "differences in the behavior are driven by a selection effect" (Alatas et al. 2008, p. 4).

Thus, on the first dimension we focus on productivity as an observable characteristics, and the unobservable motivations such as selfishness and pro-social preference are on the second dimension.

There are four different types of individuals working in both sectors:

1. *productive and pro-social*,

2. *productive and pecuniary motivated*,

3. *unproductive and pro-social*,

4. *unproductive and pecuniary motivated*.

Our two research questions are:

1. **How does sorting through productivity affect sorting in non-observable characteristics?**

   There is evidence that sorting works well with respect to productivity between public and private sector. We want to find how does this affect the distribution of non-observable characteristics.

2. **Are public sector employees more likely to be less altruistic?**

   Despite the fact that Kazakhstan has initiated numerous anti-corruption policies, the outcome on CPI score after the each attempt has not been improved much. We examine if repeated failure of anti-corruption programs is due to poor implementation or not really understanding the root causes of corruption.

The literature from the corruption experiment on self-selection is mixed (Alatas et al. 2008, Banerjee et al. 2015, Hanna and Wang 2017, Gans-Morse et al. 2020). These mixed results are due to the fact that self-selection into the public sector, especially in the developing countries, has not adequately been explored. Alatas et al. (2008) find no evidence of a selection effect in a result from a corruption experiment on Indonesian public servants. Banerjee et al. (2015) on the other hand find that corrupt people self-select themselves into the public sector. Similarly, Hanna and Wang (2017), show that cheating on a simple laboratory task predicts corrupt behavior by civil servants.

In our methodology we follow Hanna and Wang (2017) to examine the decision that an individual applies for a government position given the returns to

various preferences and characteristics in public and private sectors. Using simple laboratory task they find evidence of selection of dishonest individuals in public sector. In our experiments we revised the framework used by Hanna and Wang (2017) and introduced some quality improvements in core component of Hanna and Wang (2017)'s conceptual framework. In a dice task game Hanna and Wang (2017) takes the entire group as a treatment group in our sample we are able to immediately compare treatment to control group. Next, we distinguish pro-social preferences with altruism and donation. Which allows to discuss the connection between altruism and cheating in a detailed manner. We find correlation between altruism and honest behavior is more likely to be due to framing effects.

We find that people who cheat on a simple laboratory task are more likely to prefer public sector over private sector. This result is in line with Hanna and Wang (2017) cheating predicts corrupt behavior by public servants, implying that is a meaningful predictor of future corruption. Moreover, participants who appear less pro-social are more likely to cheat in a dice task game. This is also in line with Hanna and Wang (2017) as students who appear less pro-social tend to cheat more in a dice task game. Hanna and Wang (2017) also find that students who show pro-social preferences are less likely to prefer public sector jobs. In our study we did not find a link between keeping more money in the donation game or dictator game and career preference, this could be due to the small sample size.

The main contribution to paper is to explore the link between one's propensities for corruption and pro-social preferences in addition to an extra bureaucratic burden that affect the self-selection of workers. As more bureaucracy may or may not have an effect on pro-social benefits (*unobservable characteristics*), the responses to more bureaucracy are different by productive and unproductive workers (*observable characteristics*). Productive workers may quit the public sectors even having pro-social benefits since the productivity and wage are closely linked. Bureaucracy drives productive workers out of civil service and if corruption-aversion is a significant determinant of the success of anti-corruption strategies,

more paperwork will lead to more corruption and governments need to rethink how they wish to counter corruption. We examine these ideas conducting different laboratory experiments with university students and alumni.

In short, our research is about self-selection in the job market, primary concern is the effects on the outcomes in the public sector. The key claim of our work is that one of the reasons why anti-corruption policies/strategies fail, even when they are properly drafted, is because they fail to be adequately implemented and put into practice. The problem arises because such policies/strategies neglect the issue of self-selection – which may be exacerbated by the growing amount to regulation that is introduced to curb corruption.

This approach somehow found its theoretical foundation in the work of Klitgaard (1988) who introduced the corruption equation which stated that corruption is a function of the monopoly of power, (lack of) accountability and discretion. Robert Klitgaard's Formula: $C = M + D - A$.

The rest of the study proceeds as follows. Chapter 1 is Introduction, where we talk about our project, such as what we do, how we do it, what is the significance of the project and how the dissertation is structured. In Chapter 2, we discuss what is self-selection and engage with the literature on self-selection to set the stage for the next chapters. By utilizing the self-selection model we look at the individuals employment choice. As, the issue of self-selection becomes central to understand the failure of anti-corruption programs. In Chapter 3, we discuss corruption, model of anti-corruption and analyze anti-corruption efforts in Central Asia. We want to find an answer whether corruption persists because anti-corruption policies are inadequately implemented or whether they fail to address the root causes of corruption. The point is crucial since corruption has a damaging effect on the economy especially in case of a developing country as Kazakhstan. In Chapter 4, we discuss theoretical approaches of our study. What is the worker's choice and that the choice is not random because of the skills. In Chapter 5, we present comparative analysis of the results from similar experimental studies. In

Chapter 6, we present the data and methodology of the study. In great detail we talk about conceptual framework, experimental procedure, data collection and methodology. In Chapter 7, we present the main results regarding dishonesty and selection into public service and additional results regarding the mechanisms behind the observable and non-observable selection. In Chapter 8, we bring everything together and suggest how the theoretical framework presented at the beginning of the thesis may have to be refined and revised in the light of the empirical findings. We also discuss practical implications of the findings.

Chapter 2

Self-Selection

"Self-selection" is an essential topic in labor economics. In theory this term means that rational actors make optimizing decisions about what markets to participate in, such as education, job, marriage etc (Autor 2003). In practice observed economic relationships are generally endogenous outcomes of numerous optimizing decisions, rather than being exogenous causal relationships (Roy 1951, Borjas 1987). The issue of self-selection becomes central to understand whether the failure of anti-corruption programs is due to inappropriate theoretical foundations that underscore its design (Marquette and Peiffer 2015) or the poor implementation of the chosen policies. There are very few reliable estimates of corruption. And problems of measurement are mostly (if not always) due to the hidden nature of corruption (Baris and Pelizzo 2020). Anti-corruption strategies that fail, do not understand the underlining reasons behind the corruption.

Part of the ineffectiveness of anti-corruption policies is due to the measurement problems. On the problems of measuring corruption there are several studies done by Ko and Samajdar (2010), Pelizzo et al. (2017). International Corruption Indexes (ICIs), such as the Control of Corruption Index of the World Bank, the Corruption Perceptions Index of Transparency International, the International Country Risk Guide of PRS, the World Value Survey, the Bribe Payers Index, and the International Crime Victimization Survey (Ko and Samajdar 2010) use consistent methods for measuring corruption in all countries. These indices have

been criticized for relying significantly on the view of experts and reflect only western and developed country viewpoint. And because of the lack of alternative cross-national measures (Ko and Samajdar 2010) only these indices are used for generating awareness about corruption and cited everywhere as a reliable source. Therefore, (Ko and Samajdar 2010) in their paper raise the issue of the validity of these indices as more we rely on ICIs more they look ambiguous. We should not just simply criticize or ignore these measurements but increase the usefulness of ICIs through the rigorous data screening and robustness tests by using several data and methods; moreover, think about creating new measures of specific types of corruption (Ko and Samajdar 2010). By utilizing corruption indexes we can better design and evaluate different anti-corruption programs that are meant for controlling certain types of corruption in some policy areas and regions (Ko and Samajdar 2010).

In developing countries or less-developed countries corruption estimates have problems with validity and reliability because these indices are based on a small number of less reliable resources (Pelizzo et al. 2017). Therefore, domestic institutions in Kazakhstan have developed own measures of corruption that created a vibrant debate among policy makers, sociologists, criminologists, and methodologists. The new indices reflect the current intellectual debate on corruption and governance in Kazakhstan and are useful in the future to assess the validity of other indicators.

Corrupt countries yield corrupt data and, in corrupt countries it is not unlikely for anti-corruption agencies to be corrupt (Pelizzo and Stapenhurst 2014). Therefore, programs that are aimed to reward good behavior and punish bad behavior usually fail because monitors who are rewarding good behavior and punishing bad behavior are themselves can be corrupt (Gans-Morse et al. 2018). Bureaucratic corruption is widespread in many societies (Acemoglu and Verdier 2000). Government policies and bureaucratic corruption are responsible for the slow economic growth and lack of development in developing economies (Ace-

moglu and Verdier 2000). Rents attract agents with no comparative advantage and creates misallocation of talent in the public sector (Acemoglu and Verdier 2000). Moreover, corruption is a by-product of government activity, and the larger is the public sector, the greater is the opportunity for corruption (Persson et al. 2012, Acemoglu and Verdier 2000). The design of most anti-corruption programs reflects a principal-agent understanding of corruption and includes institutional reforms that are aimed to reduce the opportunities and incentives for corruption (Persson et al. 2012). But principal-agent and collective action approaches fail to work in understanding corruption models (Marquette and Peiffer 2015).

Therefore, it's very hard to achieve effective anti-corruption initiatives as punishment and monitoring of corrupt behavior presents technical challenges (principal-agent theory), and some perceive corruption as being "normal" or afraid to take a first step to implement the anti-corruption reform (collective action theory).

Typical principal-agent relationship explains that monitoring affects people's behavior in a way that it increases effort and deters dishonest behavior within an organization. This notion of corruption as a principal-agent problem that could be solved by simply increasing oversight, monitoring and control shaped anti-corruption policy making. Hence the flurry of regulations, reporting and monitoring. More recent studies have challenged this view. One stream of inquiry noted that corruption is best understood as collective action problem (Rothstein 2018), the other (experimental) showed that monitoring can actually increase corruption. The paper by Laird and Bailey (2016) "Does monitoring reduce the agent's preference for honesty?" supports such claim and provides evidence to back up such claim. They investigated that workplace monitoring actually diminishes the agent's preference for honesty. To explain such a counterintuitive finding they use relevant theories, such as behavioral agency theory and fraud-triangle theory. Specifically, behavioral agency theory suggests that individuals may respond negatively to workplace monitoring as it restricts their freedom.

The theory of the fraud triangle suggests that dishonest individuals rationalize their behavior to be dishonest or commit fraud in the workplace. The ability to rationalize deviant behavior is an important component in the fraud triangle besides incentive and opportunity.

This led to their hypothesis which states: "When the opportunity to gain from undetectable dishonesty arises, dishonesty will be higher in a monitored environment than in an unmonitored environment". To prove their hypothesis Laird and Bailey (2016) conduct an experimental test in order to detect dishonest behavior. They use three different treatment-reporting regimes for their participants: unmonitored, human monitored and electronically monitored. Participants perform a short math puzzle following Mead et al. (2009) and receive a monetary reward based on the performance of the task. The proxy for dishonesty is the difference between the verified and the unverified reporting treatments. The authors find evidence that monitoring does decrease agents' observed honesty and the type of monitoring makes a difference. In the experiment, the authors found that in the unmonitored condition, there was no indication of cheating, but statistically significant cheating was detected in the human-monitored treatment and in the two monitored conditions combined.

Further developing this line of research (Laird and Bailey 2016) may yield important clues to long-standing questions, such as why corruption is still persistent in Kazakhstan despite "increases in regulation and ethics training" ((Rezaee 2005) as cited in (Laird and Bailey 2016)).

The likelihood of punishment is a powerful incentive for the observance of social norms in human societies (Behnk et al. 2018), but despite its important role, there is also evidence that punishment is not a universal measure that promotes pro-social action (Behnk et al. 2018). For example, while punishment is an effective measure for enhancing cooperation on public goods even in the long term, it reduces pro-social behavior in other situations, such as trust game (Behnk et al. 2018). The authors signal that punishment does not always lead

to less lying and sometimes might reduce the pro-social behavior. Moreover, they make a contribution to the literature by conducting an experiment where they investigate the effect of sanctions on lying. The authors claim that previous experiments fail to show that punishing liars actually increase honesty in principal-agent relationships. Behnk et al. (2018) provide evidence that their punishment mechanism will increase honesty and trust.

Developing countries are more prone for corruption in both public and private sectors. This is due to various reasons, such as low level of economy, lack of incentives, absence of rule of law and proper institutions and low salary of public servants. Anti-corruption policy in corrupt countries might have strong legal framework but struggles with translating these laws into practice (Persson et al. 2012). Anti-corruption policies do not take into account what is happening in the labor market particularly the employment choices of individuals. Corrupt people self-select themselves in professions where the scope of corruption is high (Banerjee et al. 2014). That is why the issue of self-selection becomes very important. Corrupt people often take bribes or embezzle because such behavior is hard to observe, monitor and subsequently punish such bad behaviors (Hanna and Wang 2017). More corruption in the public sector is because the heavy bureaucratic burden drives the honest out and ends up being overstaffed with corruption prone individuals. So, anti-corruption strategies just look at the symptoms and try to fix the symptoms, but not at the underlining causes of these symptoms.

Every public or private sector organization aims to recruit the best employees who are high quality, competent and can effectively deliver their tasks in a timely manner. Public employees in every public service value such characteristics as honesty, transparency, accountability, and incorruptibility (Äijälä 2001). Some countries have difficulties in recruiting top civil service professionals or retaining the high specialists in the public sector. According to Colonnelli et al. (2020) for both bureaucrats and frontline public sector professionals the political connections are a key and quantitatively large determinant of employment in public sector and

patronage is an important mechanism behind this result. Some members of OECD countries face "critical skills shortage" Äijälä (2001) and often see that competent civil servants switch their jobs from public to the private sector. There are some underlying reasons for that, such as low level of wages; common association about the public sector being more bureaucratic, old fashioned and low prestige of civil service; seniority over merit; passive attraction of students and graduates; higher demands towards the attitude and value to work; uncertain career paths and inadequate career planning. Skills shortage (Mocetti and Orlando 2017) and political considerations (Colonnelli et al. 2020) increases the rate of less competent individuals in public sector with respect to the private sector. In areas where the corruption level is rampant the selection of dishonesty is higher in the public sector than in the private sector even with educational attainment (Mocetti and Orlando 2017). Moreover, Mocetti and Orlando (2017) find evidence that corruption is higher among managers and highly skilled workers, than clerical workers. Barfort et al. (2019) find evidence that pecuniary motivated individuals who view wage level as an important factor in employment while participating in a dictator game are less honest and prefer higher-paying private sector jobs. But this could be explained due to the fact the public sector employees in Denmark earn lower salaries than private sector employees.

Private and public sector have common output measurement problems (Burgess 2003). Private sector as a profit-maximizing agent associates its wages to productivity and the role of output/outcome is crucial in distinguishing that (Madu and Madu 2013). Whether you build the bridge you get your salary, whether you build a better bridge you get a higher salary. Private and public sector works differently on how to achieve in distinguishing between productive and non-productive workers (*observable characteristics*). Profit of the company is linked to higher salaries and bonuses of private sector employees receiving (Alshammari 2016). Some workers from sales commission, project accomplishment, etc. are rewarded with pay to observed measures of performance (Prendergast 1999) that increase

employee productivity, others are rewarded from profit-sharing arrangements. There are some workers who do the same types of job in private and in public sector, such as managers, tax advisors, security firms but the difference in public sector organizations is that they do not have clear, single goals compare to private sector organizations that are value maximization and have much clearer decision framework (Burgess 2003). Moreover, street-level bureaucrats such as police officers, tax inspectors and welfare benefits assessors are the decision-makers in the public sector who are at most basic meant to attain efficiency and some measure of equity (Burgess 2003). In the public sector the loyalty in hierarchical systems becomes much more crucial. It is very difficult to measure output but instead it is more possible. In terms of the public sector the success of the company does not affect individuals' salary as their decision depends on factors that are not easily observable by their bosses (Burgess 2003). The police are going to get the same salary whether he catches five criminals or one criminal. So, promoting efficiency is very problematic in bureaucratic settings. Moreover, complaining behavior works less in bureaucracy than anywhere else (Burgess 2003). Customer retention in private sector is an important issue as loosing a customer can be very costly (Malhotra et al. 2008) compare to public sector where bureaucrats may turn down consumers requests (Burgess 2003). This is true for developed countries and truer for developing countries. Therefore, private sector distinguishes productivity better than the public sector.

A generally accepted claim is that individuals who are mission oriented or pro-social choose to join the government sector (Besley and Ghatak 2005). These workers include government workers, teachers, firefighters, policemen, people who help the sick, environmental protectionists, etc. Workers who show such voluntary behavior are also called intrinsically motivated individuals (Canton 2005). Individuals who are pro-socially oriented are more enticed to work for social services organizations (Kolstad and Lindkvist 2012). Kolstad and Lindkvist (2012) in their work by combining data from a questionnaire and an economic

experiment find that students who prefer to work in the public health sector in Tanzania are more pro-socially motivated in a dictator game than the students who prefer to join the private sector. Intrinsically motivated individuals fall under the *unobservable characteristics* since they produce the output that are difficult to observe and accept lower payment (Canton 2005). People are intrinsically motivated for a different reasons: to do good, make a change, challenge yourself, and others; therefore, people in the private sector can also be intrinsically motivated according to (Schryvers 2019). It is dangerous to apply metrics to achieve intrinsic goals, as it undermines employees' motivation (Schryvers 2019). Their values are reduced and they start to resist (Schryvers 2019). For example, when you tell a doctor that they are evaluated on how many sick people they admit, you can undermine some important qualities they bring to their role. They start allocating less time to their patients, undersee some health issues and become less attentive.

It is more difficult to measure the effective performance and desirable employee characteristics in public sector than in private sector. Private sector organizations are viewed as profit-driven and concentrated on a return on investment, while public sector organizations are more focused on improving the capability of the organization and are seen as mission-oriented and less focused on the return on investment (Hester and Meyers 2012). The main goal of private sector companies is to generate as much shareholder value as possible. In the public sector the services that have been delivered are more intangible and less financially driven. In private sector enterprises the outputs are more easily quantified (CAILLIER 2010) because various products produced by a given firm are weighed according to their price, and then summed to calculate an aggregated output indicator. This indicator is then divided by the total costs associated with their production, which gives the total factor productivity coefficient (TFP) [1]. In the public sector, products such as various social security payments or various types of taxes collected have

[1] "Understanding public sector productivity", 2010, https://blogs.lse.ac.uk/politicsandpolicy/understanding-public-sector-productivity-%E2%80%93-the-lse%E2%80%99s-simple-guide/

no price.

The main components of efficiency and effectiveness are input, output and outcome that are used for performance measurement and management in public and private sectors. What we are putting into that service, what we are taking out of that service and what the service is delivering (Barrow 2019). Inputs are usually monetary and non-monetary resources (like budgets) and often are the same for public and private sectors. However, public and private sectors are differ on the outputs and outcomes as they are difficult to measure. Clearly it is more easier to measure them in private sector as they are more financially driven but more difficult to measure in the public sector. Outputs are tend to be services provided, primarily in public sector such as non-financial services. Outcomes are more qualitative: what we actually achieved and they are harder to measure. For example (Djellal and Gallouj 2013), in police the output indicator would be number of fines and arrests, and outcome would be the reduction in crime rate. In health the output indicator would be number of treatments and bed days, and outcome indicator would be life expectancy. In Education the output indicator would be number of students and number of teaching hours and outcome indicator would be education level and investment in human capital. Job performance is important not only for workers but also for employers as they impact decision on promotions, merit increases, bonuses and terminations (CAILLIER 2010).

Ashraf et al. (2016) were the first who conducted the experiment on the selection that affects the performance into public services delivery. Bó et al. (2013) complement Ashraf et al. (2016) literature by using the experiment to investigate financial incentives specifically higher wages on the selection of the public sector. They have found that financial incentives play a big role in selecting better candidates in terms of quality and motivation. By estimating a structural dynamic labor supply model Duflo et al. (2012) find that with direct monitoring and credible financial incentives absenteeism fell from an average of 42 percent to 21 percent in treatment schools among teachers in India. Nevertheless, much less is known

about what type of individuals select into public service, whether pecuniary incentives such as opportunities for rents or pro-social incentives. And how do the amount of bureaucracy and red tape affect this decision? Rent seeking proves more lucrative than productive work (Mauro 1997). Therefore, I explore whether attracting the specific type of employees affect the success of anti-corruption programs using the case of Kazakhstan.

The literature from the corruption experiment on self-selection is mixed (Alatas et al. 2008, Banerjee et al. 2015, Hanna and Wang 2017). These mixed results are due to the fact that self-selection into the public sector especially in the developing countries has not adequately been explored. Corrupt people self-select themselves into bureaucracy in India (Banerjee et al. 2015). Banerjee et al. (2015) used a new corruption game which models embezzlement rather than bribery unlike other existing experimental corruption literature with public and private sector aspirants as the population of interest. The design of a game consists of two groups – "workers" and "supervisors". Randomly assigned to each other supervisors need to check workers matrix problems and pay them 1 token (which equals Rs. 50) for every correct answer. The payment in envelope and grading is made anonymously. So supervisors have a chance to either overreport at the token counter, underpay the workers performance or both, or stay truthful the whole time. The results show that public sector aspirants overreport their average number of tokens at 4.02 compare to their counterpart private sector group, at 0.67. Moreover, the average earnings of a corrupt which is the sum of overreporting and underpayment are higher in the public sector at 7.56 than in private sector at 3.27.

Alatas et al. (2008) on the other hand find no evidence of a selection effect from a corruption experiment with Indonesian public service and students. Public servants in Indonesia have lower tolerance to engage in corruption than students and the reason lies in the behavior that is driven by real life experience.

Relatively few laboratory tasks have been conducted in developing countries, Hanna and Wang (2017) have conducted a series of surveys and laboratory experi-

ments, such as dice task, message game, pro-social preferences game and cognitive ability measures with college students and government nurses in India. According to their graph distribution on dice game the experimental outcomes showed that cheating had high tolerance among students. Nurses have also cheated but to a lesser extent than the students.

In contrast Banerjee et al. (2015) discovers that occupational choice of an individual is correlated with their intrinsic characteristics, such as the moral cost of indulging in unethical acts and even though the possibility of being corrupt is the same for public and private sector they found that the corrupt individuals self-select themselves into public sector. Their evidence is based on a corruption experiment with Indian aspirant bureaucrats indulging in more corruption than private sector job aspirants. Hanna and Wang (2017) try to find through which selection is between corrupt behavior, pro-social preferences, and workers' ability to enter the civil service.

Gans-Morse et al. (2020) have also conducted similar study in high-corruption context and find no evidence of corrupt behavior in public sector preference; moreover, find that people who aspire public sector employment display higher levels of altruism. This case is anomaly since corruption is widespread in Russia. In 2018, when the data collection was completed Russia ranked 138 out of 180 in Corruption Perception Index (CPI). Later in chapter on Comparative analysis we explain in detail why the findings run counter to India and find mirroring results with Denmark.

2.1 Employment choice

By utilizing the self-selection model we look at the individuals in the labor market who choose to work for either private or public sector. The unobservable characteristics are pro-social and pecuniary motivated individuals in both sectors. The observable characteristics are high productive and low productive working in both sectors.

2.1.1 Unobservable characteristics of public and private sector individuals

Among the unobservable characteristics of public and private sector individuals in our study, We consider pro-social behavior, which is an important factor of self-selection. Moving away from the traditional emphasis on purely selfish motives, an increasing number of works are devoted to the study of the role of pro-social preferences in individual decision-making (Lagarde and Blaauw 2014).

Research done by Rotolo and Wilson (2006) using Current Population Survey (CPS) has demonstrated that public- and nonprofit-sector workers have more pro-social motivation and stronger public-service motivation than private-sector workers. Public-sector workers are more favorably disposed toward doing work that is useful to society and allows them to help other people (Rotolo and Wilson 2006). Their goal is not make a profit but to channel any excess revenue towards further fulfilling the organization's mission, which is very significant for people interested in volunteer labor supply (Rotolo and Wilson 2006). According to Rotolo and Wilson (2006) there are three reasons why public sector workers are more likely to volunteer than private-sector workers: First, public-sector workers have stronger sense of social responsibility, have more "collectivist preferences", they believe more in social equality, and are more tolerant of minority groups. Second, public-sector workers have a stronger self-interest than private sector workers in many types of volunteer work, especially community activities aimed at strengthening or supplementing the work of government agencies such as schools, welfare facilities, recreational facilities, and the like ((Brewer 2003) as cited in (Rotolo and Wilson 2006)). The third reason that public sector workers are more likely to volunteer than private sector workers has to do with the social relationships in which this work is built. Because so few volunteers work in private firms, public sector workers are much more likely to encounter volunteers in the course of their work. Daily interaction with volunteers increases the likelihood of gaining knowledge about volunteer work, opportunities and chances to be an

invited volunteer.

Recently, a series of papers in the development literature (Tonin and Vlassopoulos 2015) have looked at the issue of worker self-selection into the public sector but the results are mixed. This mixed results is probably due to the lack of information on integrity and corrupt behavior at the individual level, as well as to the difficulty in finding exogenous variation in the availability of jobs with and without rent extraction opportunities (Brassiolo et al. 2020).

Hanna and Wang (2017), Banerjee et al. (2015) find negative selection into the public sector. While Banuri and Keefer (2013) using novel evidence from lab experiments with approximately 1 700 subjects from the government and private sectors in Indonesia, find that public sector employees tend to undertake more volunteer work. Moreover, pro-social individuals are more likely to select into the public sector when the public sector wage is low than when it is high; and real "world" public sector subjects are more pro-social than a closely matched sample of private sector subjects (Banuri and Keefer 2013).

Lagarde and Blaauw (2014) in their paper using data from a panel of South African nurses linked experimental measure of pro-social preferences and revealed preferences outcomes. The authors were able to associate the generous behaviours observed in framed dictator games (DG) to the choice of rural jobs. Thus, the more dedicated nurses - as measured by their generosity towards patients in the dictator game - the more likely they are to choose rural work. (Lagarde and Blaauw 2014).

More recent findings by (Brassiolo et al. 2020, Gans-Morse 2019) are in line with evidence from the handful of existing experimental studies of corrupt self-selection from other high-corruption countries, such as India (Banerjee et al. 2015, Hanna and Wang 2017).

Brassiolo et al. (2020) in their article first provide causal assessments of the impact of bribery opportunities on the integrity of those who independently choose a particular job or task. Their results highlight that corrupt opportunities can not only attract dishonest people, but also repel honest ones, perhaps because

of reputation or the moral cost of being in a corrupt environment. Moreover, Brassiolo et al. (2020) experiment sheds light on one of the reasons why corruption is so persistent. Organizations where rent-seeking is possible disproportionately attract dishonest people, resulting in higher levels of corruption and reinforcing the bad reputation of these organizations. In short: corruption breeds corruption. To break this vicious circle, policies aimed at improving the composition of organizations can be a promising avenue for reform (Brassiolo et al. 2020).

Gans-Morse (2019) find that Ukrainian law students are more likely to cheat and bribe, and less likely to display altruism in laboratory games. The results from conducting an experimental game and a survey show substantial evidence of corrupt self-selection and little evidence to support the idea that anti-corruption campaigns have inspired students with pro-social motivations to pursue public sector careers. Therefore, the students are more likely to aspire to careers such as judges, investigators, prosecutors, bailiffs, and government lawyers.

Gans-Morse (2019) recruited 577 participants with a focus on legal profession who engaged in a survey and experimental games. The experimental games included the dice task game adopted from Barfort et al. (2019) to measure dishonesty; corruption game used in Barr and Serra (2010); *pro-social preferences game* builds off Banuri and Keefer (2013), Hanna and Wang (2017), Barfort et al. (2019) the study measured pro-social preferences using a variant of the dictator game. The survey collected the data on demographic and attitudinal indicators that have been shown or hypothesized to influence career preferences, including gender, class year (i.e., first-year, second-year, MA student), department of study, relatives' occupations, family income, and ability (measured with self-reported GPA and Unified State Exam (ZNO) scores).

The analysis from the dishonesty game exhibited that participants showed a wide range of propensities for dishonesty in the dice-task game: 2% of the sample purely maximized their payoffs by reporting 40 correct guesses out of 40; at least 10% of the sample was fully honest, reporting 7 or fewer correct guesses

(an honest participant on average would guess between 6 and 7 rolls correctly); 82% of respondents reported 10 or more correct guesses, despite the fact that the probability of honestly guessing right 10 or more times is around 12%. From the results of the game an average participants cheated on more than one of every three rolls (Gans-Morse 2019).

Compared to the results of the dice-task game, in the bribery game, most participants were unwilling to engage in an act explicitly labeled corruption. The analysis from the corruption game exhibited that 30% of participants randomly assigned to the role of citizen offered a bribe, while 24% of participants assigned to the role of bureaucrat were willing to accept a bribe. So, overall 27% of participants offered or accepted a bribe. In pro-social preferences game only 7% of participants kept all 40 hryvnia (max amount of donation to charity) for themselves. 31% donated all 40 hryvnia to charity.

2.1.2 Observable characteristics of public and private sector individuals

Autor (2003) analyzing Roy's research and Borjas (1987) papers makes important conclusions that a significant difference between Roy's model from previous work is that it is a model with several indices (in this case, 2 indices): workers have skills in each occupation, but they can only use one skill or another. Consequently, workers are free to choose the sector that gives them the highest expected earnings. He also cites Borjas (1987) example of self-selection for the US government service. Although the return on skills and education in the United States grew rapidly in the 1980s, the structure of public sector wages, while stable, has declined. Hence, a case of negative hierarchical sorting arises, where highly skilled workers leave government for the private sector, while low-skilled workers remain in government jobs to protect themselves from falling wages.

In her research, Guravleva (2015) comes to the conclusion that in Russia, private sector employees receive higher wages compared public sector employees:

this difference varies from 7 to 40%. Indeed, low wages reduce the attractiveness of the public sector, which creates difficulties for the state in the process of recruiting and retaining highly qualified workers, which leads to a decrease in their efficiency.

According to neoclassical economics, workers with the same potential and employed in similar jobs should receive the same wages. Given that the level of education is directly proportional to the level of labor productivity, and therefore to wages.

The acquired skills and knowledge, as well as other attributes of the individual, affect the individual directly, and self-selection to a particular sector and profession - indirectly. By choosing a place of work, an individual maximizes their own labor productivity. At the same time, remuneration can consist not only of monetary payment, but also of non-monetary benefits, such as job safety, working hours, prestige, status, etc. It is no coincidence that an employee often agrees to lower wages in exchange for more preferable working conditions. Nevertheless, Gronau (1974) find that in the case of married women, when their price of time in home activities is sufficiently high relative to their market productivity, the woman will decide to stay out of the labor force altogether.

Several studies show that factors that are not related to productivity, such as physical appearance Hamermesh and Biddle (1994), physical height Judge and Cable (2004), social activities Persico et al. (2004), personality traits Almlund et al. (2011), are also rewarded in the labor market, that is, lower wages are compensated by other factors that increase the utility for workers (as cited in Guravleva (2015).

The incentives and abilities of the personnel employed in the government bureaucracy largely determine the ability of the State to effectively implement policies and effectively achieve the desired results in regulation, provision of infrastructure and provision of services (T. H. Gindling 2019). Wages in the public sector strongly affect the quality and motivation of staff, as well as the competitiveness of the entire labor market, and financial stability. In some countries the wages in the public sector are higher than in private sector, that is, civil servants

have not only better working conditions, but also access to broader social benefits and at the same time receive higher wages.

It was found that public sector workers in the countries of the European Union in 2010 using the study of the European Structure of Earnings Survey (hereinafter SES), compiled by Eurostat for 2006 and 2010 received on average higher wages than comparable private sector workers, even after taking into account the level of education (Castro et al. 2013).

The wage setting behavior of the public sector is likely to differ from the private sector due to the difficulty in measuring the labor productivity (Lamo et al. 2008). In general, it is noted that the public sector is less efficient than the private sector, and an increase in its size negatively correlates with economic growth, although this is not the rule (Pater and Skica 2014). Pater and Skica (2014) analysed the productivity of capital and labor in private and public sectors in Poland, and their analyses indicated that the private sector has a higher productivity in comparison to the public sector, and in order to achieve adequate economic growth in Poland, it is necessary to control the size of the public sector in terms of the number of employees and the cost of fixed assets.

A classical model of Baumol (1967) "Macroeconomics of Unbalanced Growth" assumes that the economy is divided into two productive growth sectors: sector one "stagnant" (Baumol et al. 1985) where the productivity of labor is constant, and "progressive" (Baumol et al. 1985) where the productivity of labor grows cumulatively at a constant compounded rate. The logic of the model states that if productivity and wages grows in the progressive sector the costs will not rise at all. But, if the productivity is constant in stagnant sector every rise in wages will yield these costs to rise cumulatively and without limit.

On average employees working in the public sector earn about 5.1% more hourly wages than in the private sector in Australia (Mahuteau et al. 2017). Moreover, public sector wage premium is slightly higher for females than for males 5.5% and 4.6% respectively. However, in the context of developing countries, little

is known about the characteristics of public sector workers and about wages in the public sector compared to the private sector.

As for the countries with economies in transition, which includes Kazakhstan, the situation is exactly the opposite: there is a significant wage gap in favor of the private sector. Polish authors (Adamchik and Bedi 2000) note that workers employed in the private sector receive 7 to 10% higher wages than the public sector workers, so the government faces problems in attracting and retaining qualified labor. Public sector employees in Russian earn less than their private sector counterparts and this holds throughout the whole wage distribution (Gimpelson et al. 2019). In the case of Ukraine, Gorodnichenko and Peter (2007) find that public sector employees receive 24–32% less wages than their private sector counterparts and they argue that bribery is the most likely explanation for the observed wage differences.

In the public sector, wages depend on the ability of public sector employees to extract as large a share of the State budget as possible (Rees and Shah 1995). It is also possible that civil servants have the right to vote when determining the size of the state budget. For this purpose, they can use political skills, connections. Obviously, in the public sector, the relationship between wages and productivity may be weak. Therefore, the link between salary and productivity works better in the private sector.

The same situation is in developing Kazakhstan. According to the data on labor market, overview of Kazakhstan wages in the public sector are only 82% of the national average (Kurmanbekov 2019). By comparison, salaries in the private sector, including the financial sector, are approaching 200% of the national average (Table 2.1). Accordingly, labor productivity in the public sector is almost 8 times lower than that of the financial sector. Such imbalances lead to the fact that less qualified people, often prone to corruption, enter the public sector.

Do people with different qualifications self-select into the public sector and are these individuals also more prone to corruption?

Table 2.1: Employed by industry, productivity, salary level

Industries	GDP (%)	Employment (%)	Productivity 2010-18, av. annual (%)	Salaries, % from average
Agriculture	4.2	14.2	9.4	60
Industry	28.7	12.6	1.2	143
Mining	15.2	3.2	-1.2	228
Manufacturing	11.6	6.9	3.2	114
Power supply	1.6	1.7	2.4	96
Water supply	0.3	0.9	-5.1	69
Construction	5.4	7.2	3.4	133
Trade	15.9	16.0	5.8	97
Transport, storage	8.3	7.3	3.0	131
Accommodation, food services	1.0	2.2	-1.7	94
Information, communication	1.8	2.0	4.9	144
Financial	3.4	2.1	-3.1	202
Real estate operations	7.6	1.8	-1.3	94
Professional, scientific	4.3	2.9	-0.4	176
Administrative, support services	2.3	3.4	0.5	117
Public administration	1.5	5.6	-0.4	**82**
Education	2.7	12.6	-0.6	64
Health care, social services	1.9	5.7	-1.0	69
Arts, entertainment and recreation	0.7	1.7	7.8	79
Provision of other services	2.9	2.8	-0.3	125

Notes: Kazakhstan labor market – subdued growth by Asan Kurmanbekov, April 2019, https://halykfinance.kz/download/files/company-documents/research/labour2019.pdf.

At the same time, there is a surplus of labor in the state structures of Kazakhstan. So, in 2017, government organizations employed about 1.8 million people, which corresponds to more than 20% of the total number of employees. The bulk of those employed in the public sector are in education and health care. The growth of employment in public administration and in the budgetary sphere in 2010-2017 amounted to 20% in the total growth in employment of employees. Taking into account those employed in national holdings (350 thousand workers), the share of public sector employees in total employment in the republic approaches 25%, which is a high indicator (Kurmanbekov 2019). This redundancy of labor in the public sector is partly due to the high level of bureaucracy in the

civil service and excessive paperwork.

2.1.3 Effect of bureaucracy on self-selection of workers

Wage, is number one indicator of productivity level. Wage structure influences the labor supply decisions and alters the sorting of workers between public and private sector jobs Borjas (2002). Such differences in wage structure affects the behavior of economic agents. One of the consequences of the policy of wage bias in the public sector is the problems with the recruitment and retention of civil servants (Pederson et al. 1990).

The wage structure in the public sector requires different types of skills than the private sector due to the nature of reward mechanism in public and private sectors, in the former the profit constraint is replaced by an ultimate political constraint (Gunderson 1979). In such conditions, the wages of public sector employees ultimately depend on their ability to compete with other interested groups for the allocation of the state budget and with taxpayers for the size of the budget (Gunderson 1979). Therefore, profitability is not immediately either measurable or its not the core objective in public sector. When you increase profits for the owner in private sector you are rewarded, that is a closer relationship with the success of the company. Due to this its much unclear about the marginal contribution of any employee in the public sector. Different type of skills or outcomes required for the promotion in the public sector. In public sector good political connections, good convincing skills are used.

When the labor market requires different type of skills from its members then labor market participants will self-select those who are more productive in producing output will go to the private sector, those who are more skilled in making political connections or making political cases will choose public sector.

The responses to more bureaucracy are different by productive and unproductive workers (*observable characteristics*). When, productivity and wage are closely linked, productive workers may quit the public sector because of more bureau-

cracy even having pro-social benefits. Borjas (2002) did examine variation in the state government-private sector pay differential across all states. By analyzing the data from "US decennial Censuses and the Current Population Surveys" Borjas (2002) suggests that high-skilled private sectors are less likely to quit their work in private sector in order to switch to public sector, compare to high-skilled public sector workers who are more likely to move to private sector jobs. Moreover, Siminski (2013) finds that public sector wage premium does not vary with skill. Which means that if low-skill public sector worker receives a wage premium, it is no larger than that of high-skill worker.

According to the Agency of the Republic of Kazakhstan for Civil Service Affairs, there are 99 thousand officials in Kazakhstan. There are 52 363 officials in central government agencies, 46 363 in local government agencies (Bokaev 2020). The Ministry of Finance has the largest staffing - around 20 thousand people (with subordinate structures), in the Ministry of National Economy - over 4 thousand, in the Ministry of Culture - more than 3 thousand people. In the Ministry of Agriculture, the staffing limit is set at 9 thousand people.

Any bureaucracy seeks to gain more power, more rights, thereby attracting more state budget resources. And the competition between ministries, only superficially similar to the competition between enterprises in the market, is about who will seize power more, who has more influence. And this requires a constant increase in the apparatus, its functions and the number of people who provide them.

Despite the digitalization, automation, e-government, transfer of functions to a competitive environment, the number of civil servants in the country is growing steadily, as are the costs of maintaining the state apparatus. One of the reasons is that jobs in the public sector are often not received by the most qualified and motivated specialists who do not have the potential to create quality growth. As a result, each head of a state enterprise, not getting results in his work, recruits more and more employees. Civil servants should not simply be laid off: they can

move to the private sphere along with those state functions that are transferred annually to a competitive environment.

Chapter 3

Anti-corruption policies

3.1 Fighting Corruption and the Growth of Bureaucracy. Evidence from Central Asia

Corruption is a global problem, as it prevails in all countries, regardless of their political structure but the scale of corruption is different. It permeates in all sphere of society and manifests itself in a wide variety of forms and manifestations. In addition corruption distorts the country's economic and social policy, deteriorates the investment climate, weakens the manufacturing sector of the economy, restricts competition, undermines the democratic foundations of the state, where everything should be transparent. Moreover, corruption undermines the economic system of the state, which hinders the development of business and entrepreneurship in general. As entrepreneurs must obtain the permission from the hands of officials, for which they pay bribes to government officials.

Corruption by definition is any use of public resources for improper (private) purposes: such as obtaining additional illegal income or political gain. Corruption is a consequence and cause of a number of other problems: such as, underdevelopment of the court, non-democratic institutions, lack of freedom of speech and economic stagnation. All of this is interconnected and corruption is one of the key elements of this system. A system that distorts incentives for develop-

ment and investment, and destroys competition. A corruption tax kills economic growth more than a regular tax. Research done by (Fisman and Svensson 2007) "Are Corruption and Taxation Bad for Growth? Evidence at the Company Level" shows that if a firm pays 1% of its revenue in taxes and 1% in bribes, then the impact on economic growth differs threefold. Corruption at the same rate destroys economic growth more. When the company needs to pay taxes they plan ahead their expenses and what is left after paying taxes the company knows that it remains within the company. Corruption on the other hand is an illegal payment and a bribe is an illegal payment; therefore, corruption undermines the desire to invest in production development. Mauro (1995) was first who contributed on the corruption-growth nexus as corruption is found to lower investment, thereby lowering economic growth. This negative association is significant, both in a statistical and in an economic sense. For instance, if Bangladesh improves the integrity and efficiency of its bureaucracy to the level of Uruguay, its investment and its yearly GDP growth rates would rise by almost five percentage points and by over half a percentage point respectively (Mauro 1995).

In countries where institutional corruption prevails "unprincipled" principals use their managerial discretion (Schuster et al. 2020) over hiring and firing, and performance pay in order to favor "unprincipled" agents, who prioritize private interests over public interests. In countries where there is weak rule of law "unprincipled;; agents are more likely to engage in corruption compare to OECD countries that are more meritocratic and have stronger norms of integrity, and rule of law. In such countries "principled" principals are less likely to abuse managerial discretion to favor "unprincipled" agents (Schuster et al. 2020).

According to Transparency International, Kazakhstan is ranked 102 out of 180 in Corruption Perceptions Index in 2021. Transparency International defines corruption as the "abuse of entrusted power for private gain". The Law of the Republic of Kazakhstan on the fight against corruption dated November 18, 2015 No.410-V provides the most clear definition of corruption, as an illegal use by

persons holding a responsible public position, persons authorized to perform public functions, persons equated to persons authorized to perform public functions, officials of their official (official) powers and related opportunities in order to obtain or extract, personally or through intermediaries, property (non-property) benefits and benefits for themselves or third parties, as well as bribery of these persons by providing benefits and advantages. [1].

UNODC defines corruption as a "complex social, political and economic phenomenon that affects all countries".

Kazakhstan has begun its fight against corruption from 1998 with the Law of the Republic of Kazakhstan on the fight against corruption dated July 2, 1998 No.267-I. In recent years, Kazakhstan has been actively involved in the fight against corruption. Starting from 2015, a new anti-corruption strategy of Kazakhstan was formed. Despite the various measures taken by the state, corruption is considered as a serious problem in Kazakhstan and the country still fails to achieve the desired results. Figure 3.1 shows the control of corruption and GDP per capita, PPP (current international $) in 2020 using the data from World Development Indicators and Worldwide Governance Indicators of the World Bank. Kazakhstan among other countries is more corrupt taking into account the economic situation.

According to the survey question during our experimental study 82% (120 out of 146) of the respondents believe that Corruption in Kazakhstan as a very serious problem Figure 3.2. The rest of asked think that corruption in Kazakhstan is a serious problem and a somewhat serious problem.

Another survey question was asked among the respondents stated that: In the government of Kazakhstan, there is not sincere desire and will to combat corruption. 70% of asked strongly agree or agree with that statement Figure 3.3.

So, most people aware of the fact that Corruption is a serious problem in Kazakhstan and government of Kazakhstan has no sincere desire to combat it. Moreover, looking at the Figure 3.4 we can see that more than half or exactly

[1] Law of the Republic of Kazakhstan dated November 18, 2015 No. 410-V "On Combating Corruption", https://online.zakon.kz/Document/?doc_id=33478302

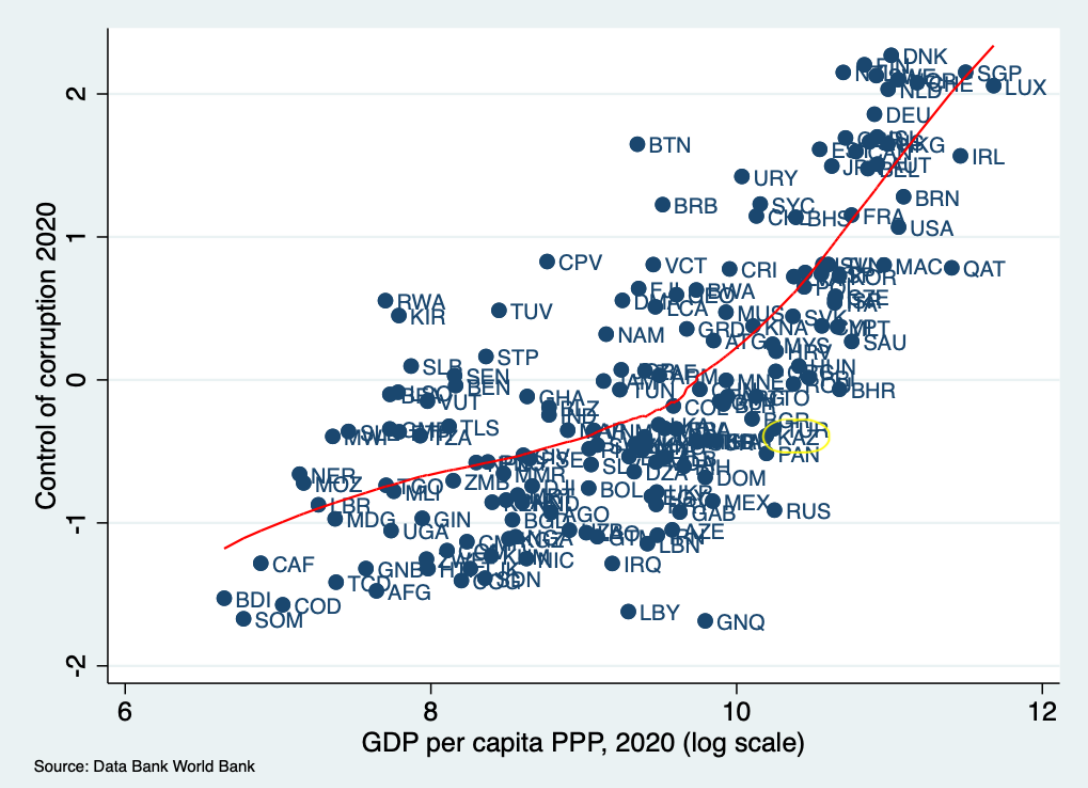


Figure 3.1: For its GDP Kazakhstan is more corrupt, than average in the world

66% of the respondents either strongly disagree or disagree with the statement that current anti-corruption strategies for combating corruption are effective in Kazakhstan.

According to Gans-Morse et al. (2018) the simplest approach to fight corruption is to promote honesty and punish illegal behavior. The economic causes of corruption are, first of all, low salaries of civil servants; therefore, Gans-Morse et al. (2018) examine the effectiveness of policies that are based on rewards that target external motives, such as higher wages. As with higher wages, the logic of higher fines creating a deterrent effect against illegal behavior is simple (Gans-Morse et al. 2018). Moreover, the authors examine the effectiveness of policies that are based on rewards aimed at intrinsic motives, such as striving for the betterment of society, and penalties of acts of corruption.

The survey question on Business Conduct in Kazakhstan during the experiment stated that: Corruption is more likely when salaries are below a basic living wage. More than half (58%) of the participants agree or strongly agree with that

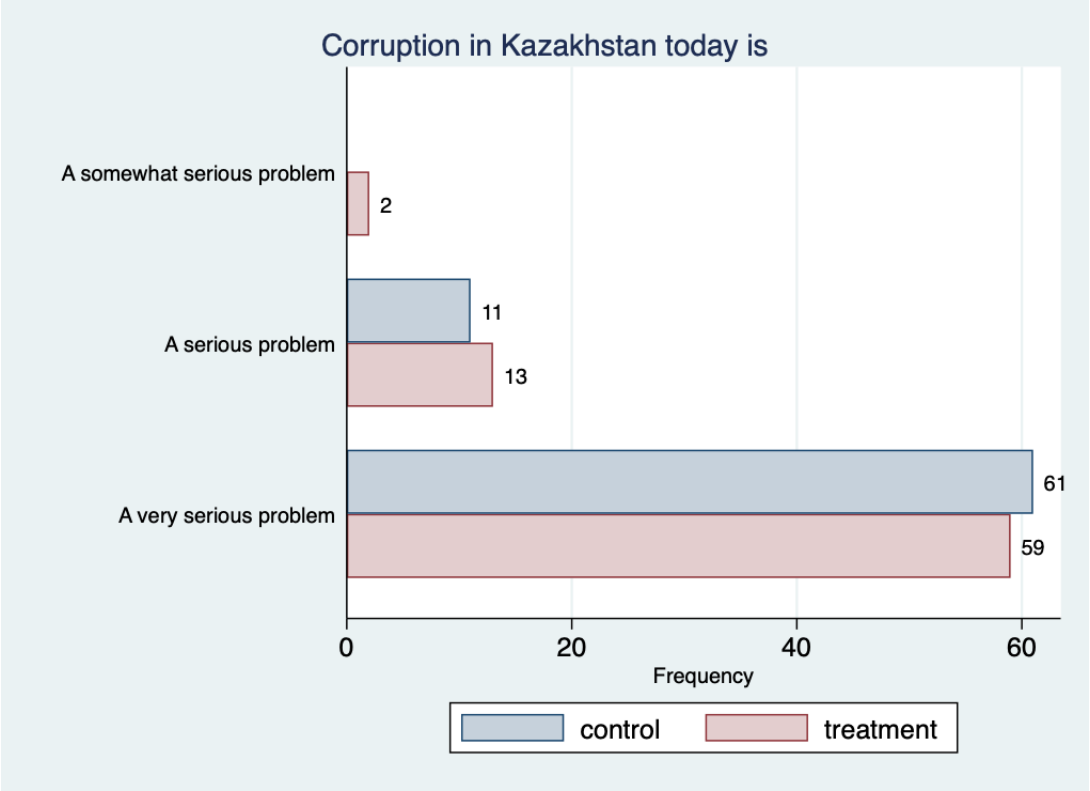


Figure 3.2: Corruption in Kazakhstan today is

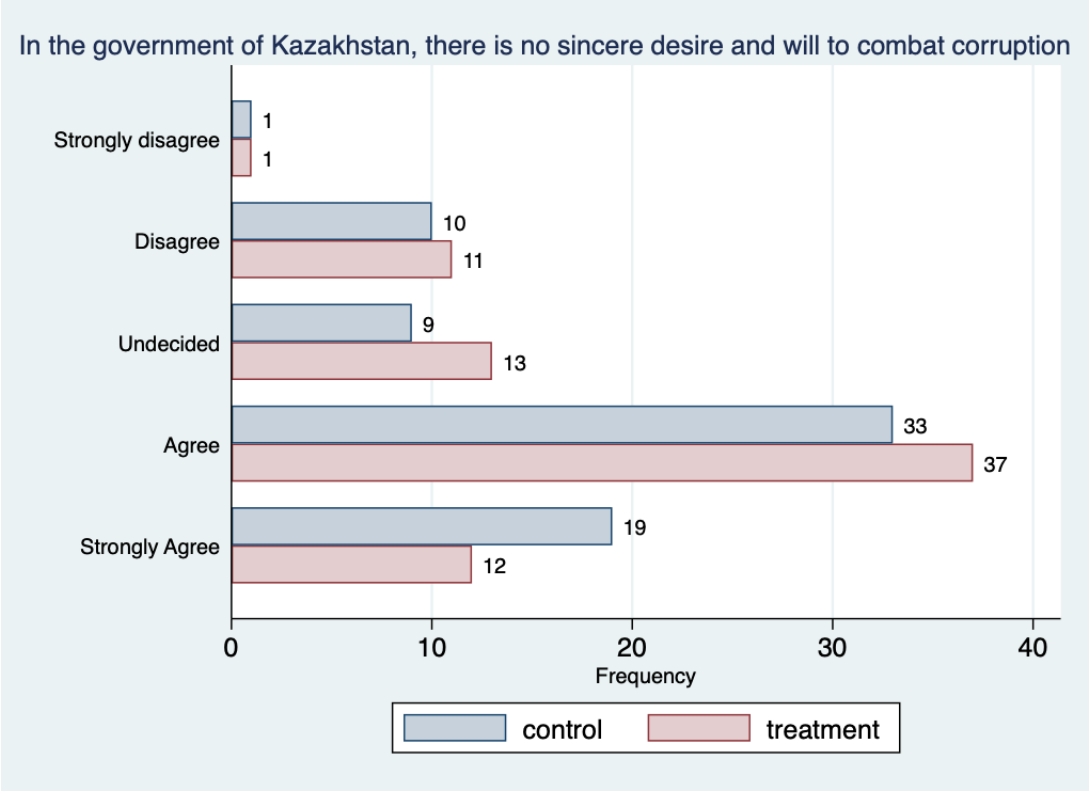


Figure 3.3: In the government of Kazakhstan, there is no sincere desire and will to combat corruption

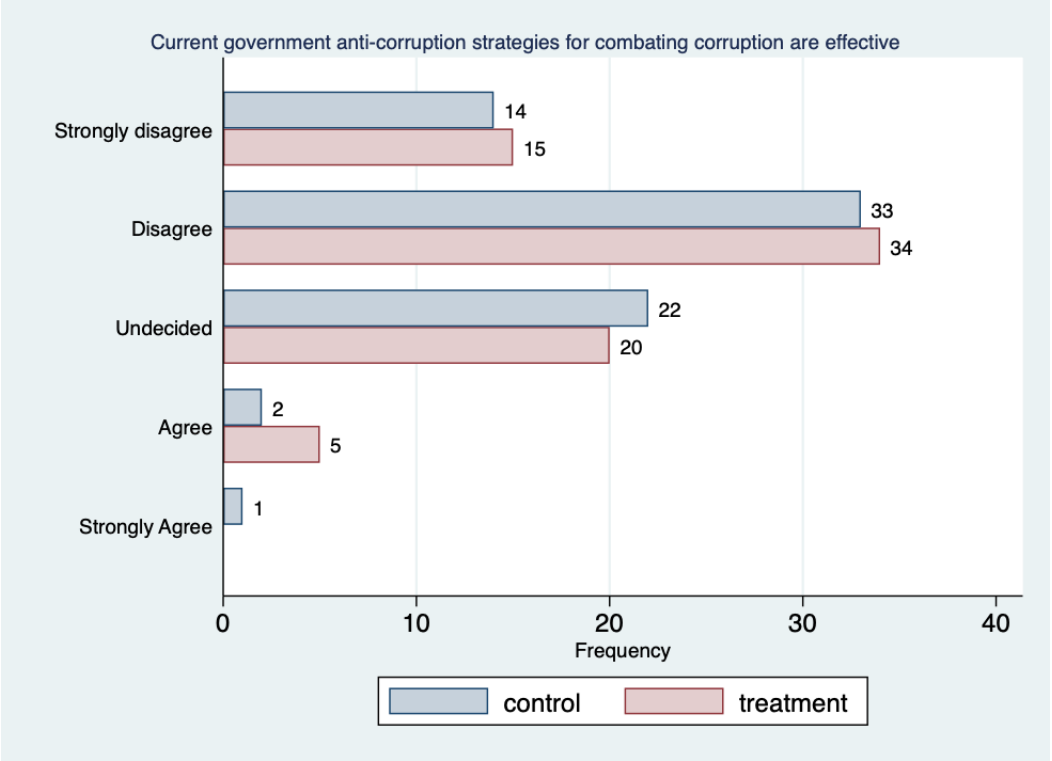


Figure 3.4: Anti-corruption strategies for combating corruption

statement compare to (27%) participants who disagree or strongly disagree with that statement Figure 3.5. Nevertheless, adequate wages may be necessary to reduce corruption but insufficient (Gans-Morse et al. 2018).

Penalties for corrupt acts is an effective policy to fight against corruption (Gans-Morse et al. 2018). Fisman and Miguel (2007) studying on corruption, norms and legal enforcement find that diplomats from high-corruption countries collected more unpaid parking tickets. And only after 2002 when enforcement authorities could confiscate the diplomatic license plates of violators the unpaid violation had dropped significantly. The survey question on Business Conduct in Kazakhstan during the experiment stated that: Higher penalties create a deterrent effect against illicit behavior. 61% of the respondents agree or strongly agree with that statement compare to 14% who disagree or strongly disagree Figure 3.6.

In this section we examine the link between government interventions and government failures. There is a wide recognition and agreement that government interventions are essential in order to correct market failures. Government failures,

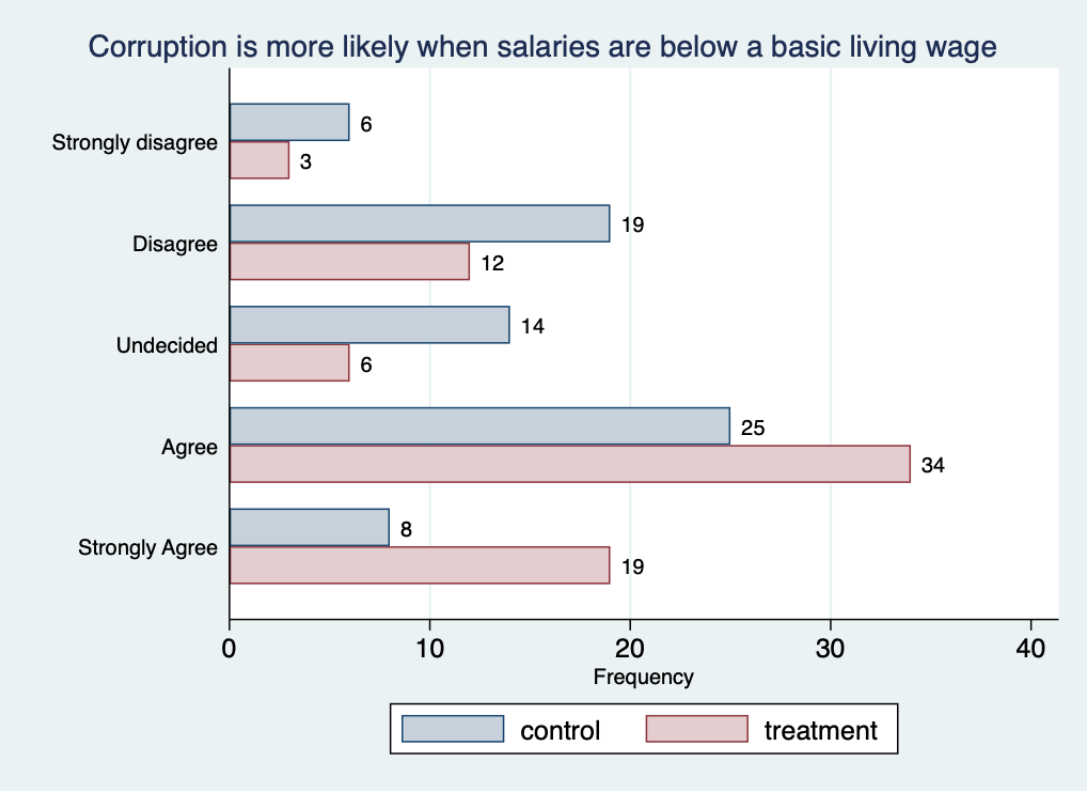


Figure 3.5: Corruption is more likely when salaries are below a basic living wage

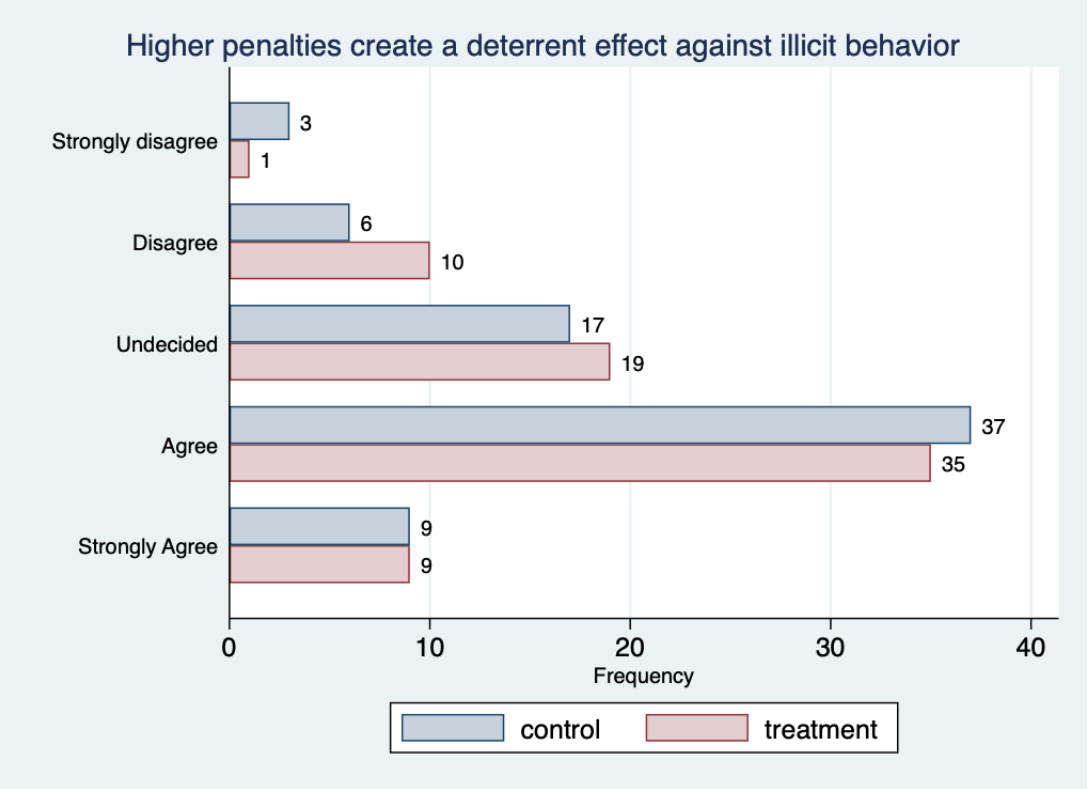


Figure 3.6: Higher penalties create a deterrent effect against illicit behavior

on the other hand, refer to inefficiencies caused by these interventions. The optimal policy mix is central in understanding the causes and consequences of corruption, especially in developing countries.

Acemoglu and Verdier (2000) develop a theoretical framework to analyze this link and point out the trade-off between market failures and corruption. In this model, the size of the government increases as the self-interested bureaucrats become more corruptible. We extend the model to include the anti-corruption policies, the policies that are designed to curb the problem of corruption. In many cases, especially in the developing world, fighting corruption has become one of the priorities. For instance, some donors periodically suspended their support on grounds of corruption Wickberg, as cited in Ankamah and Khoda (2017). Transparency International publishes every year the CPI scores that is most widely used indicator of corruption worldwide. Countries that have high degree of corruption want to have a good country credit rating as well as FDI inflows, but high CPI score harms the image of the country and damages the reputation of the state, as well as worsens its credit rating and negatively impacts the FDI inflows (Harrison 2011). Moreover, corruption hinders economic development. Therefore, developing countries worry about strengthening their fight against corruption.

Paradoxically, the special emphasis that is put on fighting corruption create a new layer of bureaucracy and a privileged class of bureaucrats, who are not immune to the original problem of self-interested behavior themselves. When anti-corruption policies bring about further growth of bureaucracy and another layer of public officials with extended powers in the public domain, the effectiveness of anti-corruption policies is questionable. This can be demonstrated by the evidence from Central Asian countries.

3.1.1 A Model of Anti-Corruption

To motivate the framework, lets consider the most standard example of a negative externality (e.g. pollution) that justifies a government intervention (e.g. taxing

pollution). The success of the intervention ultimately depends on the principal-agent relationship between the government and its employees (e.g. inspectors).

Acemoglu and Verdier (2000) illustrates how the government is trapped in a situation for choosing between market failure and government failure when there is some heterogeneity between the bureaucrats who work for the government. When these employees use their power for personal gains the government not only fails in the original objective (fixing the externality problem) it also brings about the problem of corruption. One of the key results that concerns the government's paradoxical choice is the increase in the size of bureaucracy in response to the significance of the externality problem.

The more the externality is pronounced, the larger the government intervention. The larger the intervention, the greater opportunity for corruptible bureaucrats to pursue larger personal gains. When the government pays incentive payments and efficiency wages, the cost of hiring more inspectors and bureaucrats increases. The budgetary limits on the number of bureaucrats that can be employed at a higher wage will reduce the number of inspections, which lowers the private sector actors' incentive to comply. In consequence the government needs to increase fines to increase compliance. But at the same time, larger fines increase the optimal level of bribes.

In simplified terms, Acemoglu and Verdier (2000) considers a static economy consisting of a continuum of risk-neutral agents with mass 1. Agents either choose to become entrepreneurs or bureaucrats. When all agents become entrepreneurs, there is no government and the prisoners dilemma outcome prevails: the externality problem keep the economy away from the optimal. As a solution, the government hires some agents as bureaucrats who will inspect the entrepreneurs. Basically, bureaucrats inspect and reward *good* (complying) entrepreneurs with a subsidy and penalize *bad* (non-complying) entrepreneurs with a tax. When more than half of the agents choose to become bureaucrats, each entrepreneur is inspected. Otherwise inspectors choose randomly.

In this setting when all bureaucrats report truthfully, there is no corruption and the government intervention is optimal if the externality costs are large. Otherwise all agents become entrepreneurs. Corruptible bureaucrats use their information power against entrepreneurs either by threatening good entrepreneurs to report them as bad unless they pay bribes, or by collecting bribes from bad entrepreneurs and reporting them as good. It is straightforward that corruptible bureaucrats can extract larger bribes when the sum of tax and subsidy increases.

When the fraction of bribes in comparison to tax and subsidy, or when all corruptible bureaucrats can be monitored and caught easily there is no corruption. In the opposite case, corruption can be reduced to an optimal level by increasing the wages for bureaucrats to above the minimum level. If the externality problem is sufficiently large, the society is better off by paying this additional rent to public sector employees. Another consequence of above equilibrium wages for bureaucrats is the increase in the number of agents that choose the government sector. In other words, the possibility of corruption increases the optimal size of bureaucracy in order to prevent corruption. If the externality problem is small or negligible, the government intervention is counterproductive.

In the final and interesting case, when there is some heterogeneity among agents so that different success rates in collecting bribes, the government has to deal with the externality problem–if the market failure is serious enough, and suffer some level of corruption. Acemoglu and Verdier (2000) call this outcome as partial corruption.

The critical parameter in this model, in addition to the size of the market failure, is the likelihood of corruptible bureaucrats being caught. Bureaucrats, when chosen from a heterogeneous pool of corruptible and honest candidates, respond to the likelihood of monitoring in a hierarchical public sector. Since the government cannot control the pool of labor force and monitoring is costly some level of corruption is unavoidable. This optimal level of corruption depends on various factors including the size of the market failure, the cost of monitoring

public sector employees and the overall per capita income level (productivity) of the economy. When productivity in the private sector is high, individuals are paid higher, so increasing the number of bureaucrats is also more costly. In addition, by attracting productive labor to the public sector, the opportunity cost is greater, because of the decline in the private sector output.

In a less productive economy, government interventions becomes more desirable, not only for legitimate tax collections, but also for opportunities to collect bribes. Therefore, while the optimal level of corruption may be negligible in a rich economy, it will have greater costs for less developed countries.

The factors that influence the likelihood of monitoring the public officials is extremely crucial for developing economies. A hierarchical monitoring structure, in which some bureaucrats are hired to monitor other bureaucrats, not only increases the complexity of the scheme, it also exacerbates the problem. Further growth of bureaucracy is unavoidable. Multiple layers in the hierarchical system can explain the increase in the amount of paperwork and red tape introduced in the anti-corruption programs.

3.1.2 Anti-Corruption Efforts in Central Asia

KAZAKHSTAN

Kazakhstan faces a serious challenge on fighting corruption. Over the past few years, the fight against corruption in Kazakhstan has received a great attention at the highest level of government and the society as well. The Republic of Kazakhstan is the first country in the post-Soviet Union at the initial stages of the development has paid a great attention to the fight against corruption offenses. A powerful impetus for the creation of an anti-corruption system was the Address to the Nation of President Nursultan Nazarbayev to the people of Kazakhstan Prosperity, security and improvement of the well-being of all Kazakhstan citizens, in which the Strategy development of Kazakhstan until 2030 was presented to the country. One of the priorities of this strategic plan is to create “an efficient

and modern civil service corps, dedicated and able to act as representatives of the people in achieving our priority goals". The history of anti-corruption policy in Kazakhstan dates back to the Decree of the President of the Republic of Kazakhstan dated March 17, 1992 On measures to strengthen the fight against organized forms of crime and corruption. As a result, on the initiative of the Head of State on July 2, 1998, the Law No. 267-I On Combating Corruption [2] of the Republic of Kazakhstan was adopted, which became one of the first legislative acts in the post-Soviet space. This Law was aimed to protect the rights and freedoms of citizens, ensure the national security from the threats arising from manifestations of corruption. Moreover, the Law was also aimed at expanding public control over state institutions, strengthening confidence in the state and its structures, encouraging competent specialists to enter the civil service and creating conditions for the integrity of persons performing state functions. The second Law No. 410-V on Combating corruption [3] was implemented on November 18, 2015. This Law regulates public relations in the field of combating corruption and is aimed at implementing the anti-corruption policy of the Republic of Kazakhstan.

In addition, the goal of combating and preventing corruption is enshrined in numerous documents on state policy, including President's annual state of the nation addresses. In the last state of the nation address on September 1, 2020, the President Kassym-Jomart Tokayev [4] has announced that the "fight against corruption is becoming more systemic and more attention has been paid to the causes of corruption".

On December 11, 2015 the Anti-Corruption Agency of the Republic of Kazakhstan Anti- Corruption Service was founded [5] The Anti-Corruption Agency is a

[2]Law of the Republic of Kazakhstan dated July 2, 1998 No. 267-I "On the fight against corruption", https://online.zakon.kz/document/?doc_id=1009795&pos=3;-58#pos=3;-58

[3]Law of the Republic of Kazakhstan dated November 18, 2015 No. 410-V "On Combating Corruption", https://online.zakon.kz/document/?doc_id=33478302&pos=1;15#pos=1;15

[4]President of Kazakhstan Kassym-Jomart Tokayev's State of the Nation Address, September 1, 2020, https://www.akorda.kz/en/addresses/addresses_of_president/president-of-kazakhstan-kassym-jomart-tokayevs-state-of-the-nation-address-september-1-2020

[5]Anti-Corruption Agency of the Republic of Kazakhstan, https://www.gov.kz/memleket/entities/anticorruption/about

state anti-corruption body, directly subordinate and accountable to the President of the Republic of Kazakhstan, which is focused on reducing the level of corruption in areas such as the civil service, quasi-public sector, private sector, judiciary and law enforcement agencies (OECD 2017a).

Combating corruption is one of the top priorities in the nation's strategic development. Lack of actions, however, cause sentiments that lead to protest and erode people's faith in the law. The annual potential losses in Kazakhstan's economy due to corruption are estimated at USD3.8 billion, which is equivalent to 2% of GDP [6]. This is reported in the first national report of the Agency for Civil Service Affairs and Anti-Corruption of the Republic of Kazakhstan. Corruption scandals involving high-ranking officials in Kazakhstan happen with enviable regularity. Loud arrests in the country are no longer surprising. Members of the government, heads of national companies, akimats are prosecuted for bribes. Some of the examples of corruption scandals in Kazakhstan for the last couple of years:

SK-Pharmacy case The Kazakhstan Anti-Corruption Agency has initiated an external analysis of corruption risks at SK-Pharmacia, a single distributor of medicines in the country. Former chairman of SK-Pharmacy Berik Sharipov has been arrested on charges of corruption with grave consequences, abuse of authority in the purchase of medical products during COVID crisis. In June after the lockdown due to the increase incidence of coronavirus people were not able to find needed medicine, such as antivirus drugs and antibiotics. These medicine have disappeared from some pharmacy counters or were sold by the dealers at significantly inflated prices. The company SK-Pharmacy was founded in February 2009 by the decree of the government of Kazakhstan. I t is on the balance sheet of the Ministry of Health and is a single distributor that provides citizens of the country with medicines within the guaranteed volume of free medical care [7].

[6] Atameken Business Channel, 2017, https://inbusiness.kz/ru/specprojects/vzyatki-ne-gladki-31

[7] Forbes.kz, "The Anti-Corruption Service began checking SK-Pharmacy", 2020, https://forbes.kz/process/probing/antikorruptsionnaya_slujba_nachala_proverku_

Moreover, Tokayev ordered the dismissal of Aybatyr Zhumagulov, the head of Compulsory Medical Insurance Fund in connection with the coronavirus crisis as well. A criminal case was opened against him.

Astana LRT case Astana Light Rail Transit Project, is designed as a 22-kilometer elevated railway line that is supposed to connect the airport and a new train station through the city center. "While a state evaluation estimated costs at 2.6 billion tenge or USD14 million at the exchange rate of the time, Astana LRT signed a contract for 4.2 billion tenge and paid the contractor 3 billion tenge," said Sergei Perov, a representative of the anti-corruption agency. "The difference ... was embezzled through bogus companies" [8]. The project was estimated at USD1.9 billion. In 2015, China's state-owned Development Bank agreed to provide a long-term loan that was supposed to pay off USD2.6 billion in 20 years. The initial plan was for the work to be completed by 2017. But construction only began in May 2017, pushing the anticipated commissioning date to the end of 2019. And then in April, the city administration announced that the project was being frozen indefinitely because of a disagreement with China Development Bank over the terms of the loan.

EXPO-2017 case Ex-chairman of Astana JSC EXPO-2017 Talgat Yermegiyayev was subsequently convicted for receiving a bribe of USD2.46 million and was sentenced to 14 years in prison for embezzlement of funds from the national company. Together with him, 22 more people were involved in the case and all of them were brought to trial.

Serik Akhmetov's case The main person involved - in December 2015 the former Prime Minister of the Republic of Kazakhstan and ex-defense minister Serik Akhmetov was sentenced to 10 years in prison for corruption crimes. His first accusations were made in November 2014 for suspecting of participating in corruption and embezzlement of budget funds on a large scale as well as abuse

sk-farmatsii

[8] Eurasianet, "Kazakhstan: Anti-graft agents spring into action over LRT scandal", 2019, https://eurasianet.org/kazakhstan-anti-graft-agents-spring-into-action-over-lrt-scandal

of office and illegal participation in business activities. Later the article on abuse of office was requalified to obstruction of legitimate business activities by the prosecutor's office. Prosecutors insisted that Serik Akhmetov received a bribe in the amount of USD2.5 million for lobbying the interests of the private company named Tsentrstroy-Komplekt NS [9]. This enterprise, with the support of Akhmetov, who at that time headed the Karaganda region, received an order for the construction of facilities in the industrial zone of Karaganda. Prosecutors also claimed that Akhmetov had set up a bogus foreign firm in order to embezzle government money [10]. In addition, as the first deputy prime minister and chairman of the BOD at the JSC National Management Holding KazAgro Serik Akhmetov was accused of fraud during the construction of a greenhouse complex in the village of Topar. In each court session more and more charges would appear. His 10 year term was reduced twice: first by two years, then by a year and 7 months. On September 21st, 2017 Serik Akhmetov was released early from prison. It became known that the remaining prison term was replaced by limitation of freedom - for 4 years and 26 days.

Kuandyk Bishimbayev's case According to the National Anti-Corruption Bureau, Kuandyk Bishimbayev is accused of accepting a bribe totaling 346 million tenge and embezzling 1.2 billion Tenge. He was sentenced to 10 years in prison after being convicted of bribery and embezzlement but released later [11].

Ministry of Defense case Former Deputy Defense Minister of the Republic of Kazakhstan Bagdat Maikeev was found guilty of accepting bribes and illegal possession of weapons. In June 2014 he was sentenced to 6 years in prison. In

[9] Informburo, "Release of Akhmetov. What was the ex-premier tried for, and what was his path to freedom", 2017, https://informburo.kz/stati/osvobozhdenie-ahmetova-za-chto-sudili-eks-premera-i-kakim-byl-ego-put-k-svobode.html

[10] Informburo, "Release of Akhmetov. What was the ex-premier tried for, and what was his path to freedom", 2017, https://informburo.kz/stati/osvobozhdenie-ahmetova-za-chto-sudili-eks-premera-i-kakim-byl-ego-put-k-svobode.html

[11] Catherine Putz, "Former Kazakh Economy Minister Sentenced to 10 Years on Corruption Charges", 2018, https://thediplomat.com/2018/03/former-kazakh-economy-minister-sentenced-to-10-years-on-corruption-charges/

February 2015 he was released from punishment due to illness. Investigators say Bagdat Maikeev was suspected of accepting at leas USD1.5 million in bribes [12].

Financial police case In February 2017, Amirhan Amanbaev, the former head of the department for combating economic and corruption crimes financial police of Almaty city was sentenced to 14 years in prison. He was charged with aiding, pseudo-business, the creation of an organized criminal group using his official position, laundering money or property obtained by criminal means, abuse of office, bribery and a number of other articles of the Criminal Code of the Republic of Kazakhstan. 36 defendants were involved in the criminal case. On June 30, 2020, the Supreme Court SC reviewed the criminal case against Amirhan Amanbaev. As explained in the Supreme Court, the verdict of the court against Amanbaev, in violation of the constitutional principle of the presumption of innocence, was passed with an obvious accusatory bias. As a result, the collegium of the Supreme Court called correct only the verdict in part of recognizing Amanbaev guilty on one episode of abuse of office under paragraph 3 of part 4 of Article 361 of the Criminal Code with the imposition of a sentence of five years and six months in prison. On July 20, KazTAG reported that the ex-head of the Almaty financial police could be released in a month and a half. Prior to his arrest, the source of KazTAG, General Amanbaev, was called a likely contender for the post of head of the financial police of Kazakhstan [13].

In order to reduce the level of corruption risks in the organizational and administrative activities of state, law enforcement and judicial bodies, a large amount of work has been done to revise the regulatory legal acts that governed the rules for selection, career advancement and conditions of service, minimizing the possibilities for corruption. A polygraph examination has been introduced in law enforcement and judicial authorities in order to identify hidden illegal intentions,

[12] UNHCR, "Kazakh deputy defense minister arrested for bribery", 2014, https://www.refworld.org/docid/5331457714.html

[13] Kaztag, "The ex-head of the financial police of Almaty, who was imprisoned in 2017 for 14 years, was released", 2020, https://kaztag.kz/ru/news/sevshiy-v-2017-godu-na-14-let-eks-glava-finpola-almaty-vyshel-na-svobodu

negative addictions, etc. in candidates for admission. The introduction of video recording procedures for both trials and the official activities of law enforcement officials has created conditions for effective control over potential offenses on their part. The new stage in the implementation of the State's Anti-Corruption Strategy is intended to increase the effectiveness of the anti-corruption measures taken, aimed primarily at the practical effectiveness and attainability of the goals set.

In 2006 electronic government was implemented and immediately helped Kazakhstan to improve its position in world rankings. With the introduction of e-government public services became more accessible and transparent for the citizens which helped partially reduce the level of corruption and eased conditions to open up small and medium sized businesses (Janenova and Kim 2016). Business processes were optimized with One stop shop OSS information system that uses a "single window" approach. It reduced the number of documents and time of service from 60 minutes to 15 minutes (Janenova and Kim 2016). For example, fancy license plates before the introduction of specialized OSS could have been obtained through the connections with the police and the bribe now these numbers are on sale and can be obtained officially with the fixed price; moreover, income from these sales goes to the state budget which avoids the corrupt deals.

Corruption in the sphere of public procurement public authorities make an announcement on web portal to buy goods, works or services from private entrepreneurs is one of the most acute social problems of the state, since it undermines primarily its economy, generates double standards in society, and allows the existence of illegal schemes of "criminal business" so-called "kickbacks" (Lukyanov 2014). Thousands of violations in the field of public procurement are revealed annually in Kazakhstan, with damage to the budget for hundreds of billions of tenge. Among the most widespread corruption offenses are the overstatement of the purchased goods or services, as well as participation in tenders and competitions of affiliated people with officials. On April 14, 2005, the former President of the Republic of Kazakhstan, Nursultan Nazarbayev, approved the De-

cree On measures to strengthen the fight against corruption, strengthen discipline and order in the activities of state bodies and officials [14]. Later, on November 20, 2008, the Law of the Republic of Kazakhstan On Amendments and Additions to the Law of the Republic of Kazakhstan On Public Procurements was adopted, according to which the concept of electronic public procurement was introduced, a single operator in the field of electronic public procurement, the powers of the Government were widened in determining the procedure for conducting electronic government procurement. In addition, the Law of the Republic of Kazakhstan On Amendments and Additions to the Law of the Republic of Kazakhstan On Public Procurements expanded the powers of the Ministry of Finance of the Republic of Kazakhstan [15]. The automated integrated information system "Electronic public procurement" ensures the conclusion of electronic contracts on the needs of customers for the supply of goods, works, services, their consolidation, procurement procedures, determination of the supplier, publication of information about the concluded contracts and the results of their execution on the web portal of public procurement.

According to results of the first quarter of 2020 [16], the Ministry of Finance registered violations in 11 855 procedures in the amount of 191 billion tenge. For comparison: in January 2020, the Ministry of Finance reported on revealed financial violations in the amount of 39 billion tenge in the field of public procurement [17].

Palace of Peace and Reconciliation case [18] At the end of March 2020, the Esil

[14] "History of the introduction of electronic public procurement", https://online.zakon.kz/Document/?doc_id=30722152

[15] "History of the introduction of electronic public procurement", https://online.zakon.kz/Document/?doc_id=30722152

[16] Radio AZATTYK, "Any interest other than the public." How to fight corruption in public procurement?, 2020, https://rus.azattyq.org/a/kazakhstan-state-procurements-and-corruption/30791190.html

[17] Radio AZATTYK, "Any interest other than the public." How to fight corruption in public procurement?, 2020, https://rus.azattyq.org/a/kazakhstan-state-procurements-and-corruption/30791190.html

[18] Radio AZATTYK, "Any interest other than the public." How to fight corruption in public procurement?, 2020, https://rus.azattyq.org/a/kazakhstan-state-procurements-and-corruption/30791190.html

District Criminal Court of Nur-Sultan city sentenced the former general director of the state utility company of the Palace of Peace and Reconciliation, Adil Aryn, to eight years in prison with life deprivation of the right to hold office in the civil service. The court sentenced Aryn's former deputy, Nikolai Tsoi, to a restriction of freedom for a period of three years and six months, also depriving him of the right to work in the civil service for life. Also, the ex-head of the department for organizational and control work, Aidos Isakhanov was sentenced to seven years in a colony, According to the investigation, at the end of 2017, they bought a LED screen for the state-owned enterprise in the amount of 32 778 million tenge from their own bogus company. The actual cost of the screen was 11 5 million tenge. The difference of over 21 million tenge the officials appropriated from the budget. Moreover, Aryn at an inflated price bought services for aesthetic design of New Year's matinee, appropriating another two million tenge.

Flower shop supplies medical masks case [19] On April 8th, 2020 social media users drew attention to the fact that a company specializing in the supply of flowers became the winner of the competition for the supply of medical masks announced by the Department of Public Health of the Turkestan Region. When checking the terms of the contract in the amount of 5 400 million tenge, the anti-corruption service revealed a significant overstatement of the cost of masks. While in stores at that time they were sold for 800 tenge, in the contract the price was 1 350 tenge. The supplier contract has been terminated.

According to Olga Shiyan, the Executive Director of the Transparency Kazakhstan Foundation, it is important for citizens to know about government spending, because they directly affect the solution of the social needs of the population and the quality of life in general [20]. An interactive map of rural budgets appeared

[19] Chingiz Ualikhan, "Corona purchases: thermal imager for 1 million tenge and other lots of crisis tenders", 2020, https://factcheck.kz/fact-checking/koronazakupki-teplovizor-za-1-mln-tenge-i-drugie-loty-krizisnyx-tenderov/

[20] Transparency Kazakhstan, "Transparency Kazakhstan presented an interactive map of the country's rural budgets", 2020, http://tikazakhstan.org/transparency-kazakhstan-presented-an-interactive-map-of-the-countrys-rural-budgets/

in Kazakhstan [21]. After analyzing the budgets of 3 255 villages, towns, rural districts, and cities of regional subordination for 2019-2021, the fund came to the conclusion that in the regions the problems of the population that require a prompt solution, for example, the provision of drinking water in Aktobe, Turkestan and Mangistau regions or preschool education in Zhambyl, Akmola, North Kazakhstan regions and other important issues for citizens, expenses are not included [22].

KYRGYZSTAN

"Corruption is a universal problem, a phenomenon that worries our society as well. Unfortunately, corruption continues to pose a threat to our national security. Hinders our development. It remains a serious problem that harms every citizen and foreign investor", noted Sooronbai Jeenbekov President of the Kyrgyz Republic on January 24, 2020 at a regular meeting of the Security Council of the Kyrgyz Republic [23].

According to the representative of Transparency International Kyrgyzstan, Adylbek Sharshenbaev the results of failed work on fighting against corruption lies on fact that government agency fights against the consequences of corruption but not on the actual causes of corruption [24].

In 2018, a number of major politicians and high-ranking officials were detained in connection with a Combined heat and power plant modernization project CHPP. After the accident that left Bishkek residents without heat for almost a week in cold weather 11 people were arrested and suspected of violations within the framework of the modernization of the facility: from the very beginning when the contractor was just selected until the spending of the grant allocated along with

[21] Transparency Kazakhstan, "Rural budgets of Kazakhstan", http://tikazakhstan.org/selskie-byudzhety-kazahstana/

[22] Transparency Kazakhstan, "Transparency Kazakhstan presented an interactive map of the country's rural budgets", 2020, http://tikazakhstan.org/transparency-kazakhstan-presented-an-interactive-map-of-the-countrys-rural-budgets/

[23] "President Sooronbai Jeenbekov: The fight against corruption will continue", http://www.president.kg/ru/sobytiya/16042_prezident_sooronbay_gheenbekov_borba_skorrupciey_budet_prodolghena

[24] Ashakeyeva G. and Rakhmankulov K., "Transparency International: Corruption in Kyrgyzstan has not decreased", 2019, https://rus.azattyk.org/a/transparency_international_corruption_2018/29741026.html

the loan [25].

- On March 3rd, 2018 the arrests had begun with Berdibek Borkoyev who was the former first deputy general director of JSC Electric Stations that belongs to Combined heat and power plant. During the investigation it has been found that individual managers of JSC Electric Stations through front companies entered into fictitious contract agreements. Contracts were signed for the repair of boiler units and large sum of money were transferred. These funds were allocated to prepare the Combined heat and power plant for autumn and winter seasons during the period of 2017-2018 but in fact the work was carried out by the Combined heat and power plant itself.

- On April 17, 2018 a separate criminal case was initiated on the fact of corruption (Article 303, part 1) on the implementation of the project Modernization of the CHPP in Bishkek. Major officials were detained under this article. The former General Director of JSC Electric Power Plants Salaydin Avazov and his deputy Zholdoshbek Nazarov were arrested. They were suspected of lobbying the Chinese company TBEA for the modernization of the CHPP and of incorrectly estimating the project cost, which amounted to USD386 million.

- On June 5, 2018 Former Prime Minister Sapar Isakov was charged with lobbying for the interests of a foreign company which led to large damages. On the same day, MP Osmonbek Artykbaev was detained. The Prosecutor General's Office believes that during the implementation of the project Modernization of the CHPP in Bishkek Osmonbek Artykbayev, at that time the Minister of Energy and Industry, gave instructions to arrange a contract with TBEA as soon as possible on the terms it offered. At the same time, he, as well as his deputies Aibek Kaliev and General Director of JSC Electric Power

[25] Beishenbekkyzy E., "Modernization of thermal power plant: a representative of a Chinese company was detained", 2018, https://rus.azattyk.org/a/kyrgyzstan-makelek-china-tvea-gknb/29422524.html

Plants Salaydin Avazov "did not ask the mandatory feasibility study FS and other technical documents". At the same the former mayor of Bishkek, Kubanychbek Kulmatov was also detained. According to investigators, in 2014, Kulmatov used a USD2 million grant provided by TBEA for the construction of two new schools in the regions, for a school in the Kalys-Ordo residential area. He sought from a Chinese company a transfer of USD1 million directly to the account of a private company and additionally allocated more than 100 million soms from the city budget to complete the construction of the school. One of the leaders of the construction company was detained together with Kulmatov.

- On June 18, 2018 former Prime Minister, Jantoro Satybaldiev was detained. However, in addition to "corruption" he is charged with "complicity in a crime" - Article 30, Part 6.

The first president of Kyrgyzstan Askar Akaev began the fight against corruption by issuing the Decree On measures to combat corruption in the system of public service of the Republic of Kyrgyzstan dated December 18, 1992, No. 388 [26]. In order to effectively implement the state anti-corruption policy by creating a system of good governance, further strengthening the fight against corruption and economic crimes, as well as preventing unjustified and unnecessary interference of state bodies in the activities of economic entities, the next edition of President Akaev was the issuance of the Decree On measures to improve the system of combating corruption and economic crimes dated July 22, 2003 UP No. 240 [27]. Unfortunately, the campaigns against corruption did not yield the expected results. Moreover, after the Tulip Revolution it had been found that politics and majority of businesses were controlled by Akaev and his family, particularly largest sources

[26] DECREE OF THE PRESIDENT OF THE KYRGYZ REPUBLIC "On measures to improve the system of struggle with corruption and economic crimes", 2003, http://cbd.minjust.gov.kg/act/view/ru-ru/4011

[27] DECREE OF THE PRESIDENT OF THE KYRGYZ REPUBLIC "On measures to improve the system of struggle with corruption and economic crimes", 2003, http://cbd.minjust.gov.kg/act/view/ru-ru/4011

of state revenues, such as hydroelectricity, gold and foreign aid all became major sources of corruption under his ruling.

Askar Akaev served as the President from 1990 to 2005 and left the power after the Tulip Revolution in 2005 which was against Akaev's family ruling practices. Former Prime Minister, Kurmanbek Bakiev came into power and inherited from Akaev "a legacy of a state and economy increasingly captured by the personal interests of the presidential family". Action Plan for the Implementation of the State Anti-Corruption Strategy in Kyrgyz Republic was approved by the Decree of the Acting President Kurmanbek Bakiev dated June 21, 2005 No. 251 [28]. Additionally, United Nations Convention against Corruption was ratified by the Law of the Kyrgyz Republic from August 6, 2005 No. 128 [29]. On October 21, 2005 the National Agency for Prevention of Corruption and Special Supervisory Body National Council of the Kyrgyz Republic for Combating Corruption were formed in order to increase the efficiency and sustainability of anti-corruption policy, develop fundamentally new approaches to fight corruption and systemic measures aimed at prevention of corruption [30]. The Government of Kyrgyz Republic approved a set of measures to implement the action plan from February 28, 2006 No. 132 for the implementation of the State Anti-Corruption Strategy and the State Program on Combating Crime in the Kyrgyz Republic for 2006-2007 [31]. Despite all the measures taken to fight corruption under Bakiev's ruling second Kyrgyz Revolution occurred in 2010. One of the reasons of unrest were the split of the ruling elite and the growth of authoritarian tendencies during Bakiev's presidency which eventually led to the ousting of Bakiev.

Almazbek Atambaev became the president in 2011 and actively continued the

[28] STATE STRATEGY fight against corruption in the Kyrgyz Republic, 2005, http://cbd.minjust.gov.kg/act/view/ru-ru/4304

[29] LAW OF THE KYRGYZ REPUBLIC "On the ratification of the United Nations Convention Nations Against Corruption", signed on December 10, 2003 in Merila (Mexico), http://cbd.minjust.gov.kg/act/view/ru-ru/1726

[30] POSITION about the National Agency of the Kyrgyz Republic for the Prevention of Corruption, http://cbd.minjust.gov.kg/act/view/ru-ru/4352

[31] DECISION OF THE GOVERNMENT OF THE KYRGYZ REPUBLIC dated February 28, 2006 No. 132, https://www.transparency.kg/files/14.pdf

anti-corruption campaign. On February 2nd, 2012 the former President Atambaev have signed a Decree No. 26 On the State Strategy of Anti-Corruption Policy of the Kyrgyz Republic and Anti-Corruption Measures. During that period the Anti-corruption Service (ACS) has been established under the State Committee for National Security of Kyrgyz Republic. The Law of Kyrgyz Republic No. 153 On Combating Corruption dated back to August 8, 2012 had also been established. The law states basic principles of combating corruption, using corruption offenses, protecting the rights and freedoms of citizens, and public interests from threats arising from manifestations of corruption [32].

During the period from 2012 to 2016, 6915 criminal cases were opened in Kyrgyzstan on official and economic crimes related to corruption, 6695 officials were charged (Ukushov 2018). Among them were 6 deputies of the Jogorku Kenesh Supreme Council, 38 judges, 535 heads of state bodies, 110 heads of joint-stock companies and enterprises with a state share, 85 heads of law enforcement agencies. Within the framework of criminal cases on official and economic crimes, 7 billion 697 million 844.7 thousand soms were reimbursed to the state budget (source - publication on February 2, 2017, Bishkek - news agency 24.kg) (Ukushov 2018).

In 2017 the new president Sooronbai Jeenbekov has been elected to be the fifth President of Kyrgyzstan. Since then five new codes and two laws entered into force to restore public confidence. Five new Codes and two laws include: the Criminal Code, the Misdemeanor Code, the Criminal Procedure Code, the Criminal Execution Code, and the Violation Code, laws on probation and the basics of amnesty and the procedure for its application. One of the innovations is the creation of a Unified Register of Crimes and Misdemeanors - an electronic database into which information is entered on the beginning of pre-trial proceedings, procedural actions, the movement of a criminal case or misdemeanor case, applicants and participants criminal proceedings. The creation and implementa-

[32] Law of the Kyrgyz Republic dated August 8, 2012 No. 153 "On Combating Corruption", https://online.zakon.kz//Document/?doc_id=31238115#pos=1;-125

tion of the Unified Register is entrusted to the General Prosecutor's Office of the Kyrgyz Republic, which is also the holder of the register [33].

Moreover, a successful judicial and legal reform will depend on the work of new institutions such as the investigating judge, the digitization of the investigative offices and courtrooms, and probation. With the introduction of the new institution the "investigating judge" the Supreme Court proposes to increase the staffing of the judiciary by 56 judges of local courts [34].

According to (Ukushov 2018) the systemic fight against corruption is absent in Kyrgyzstan due to several reasons:

- Low level of social protection of state and municipal employees (meager salaries, pensions, etc.).
- Imperfection of the legislation, the obvious unwillingness of legislators and, in general, the authorities, to fight the causes, and not the consequences of corruption - the bureaucratic nature of the activities of state and municipal bodies, the extreme complexity of various licensing and other procedures, for example, to obtain various "pieces of paper", which leads to the "desire" of citizens to give a bribe for the speedy passage of bureaucratic procedures.
- Lack of a clear and effective system of law enforcement agencies to combat corruption as "Fighters themselves" are often hotbeds of corruption.

Preventing corruption is much more effective than dealing with its consequences. The actions of the authorities in this direction today seem to be extremely ineffective: there was no firm political will, the actions of the authorities are accidental and inconsistent. To prevent corruption, systemic, comprehensive, coordinated measures are needed to develop and implement state anti-corruption policies (Ukushov 2018).

[33] General prosecution of the Kyrgyz Republic, Automated information system "Unified register of crimes and misdemeanors", https://www.prokuror.kg/ru/page/7

[34] Supreme Court of the Kyrgyz Republic, "Kyrgyzstan to increase judiciary at the expense of investigating judges", 2018, http://sot.kg/post/v-kyrgyzstane-uvelichat-sudejskij-korpus-za-schet-sledstvennyh-sudej

TAJIKISTAN

"A decisive fight against corruption is an important condition for the formation of an atmosphere of mutual understanding in society and the people's trust in state structures and bodies", said the President of the Republic of Tajikistan, Leader of the Nation Emomali Rahmon in the message to the members of Majilisi Supreme Assembly and deputies of the Majilisi in 2018. Emomali Rahmon has ordered the Agency for State Financial Control and Combating Corruption, the Accounts Chamber, the General Prosecutor's Office and other authorized entities in this area to better organize work with the population and take effective measures to suppress corruption. The levels of corruption remain very high throughout all the stages of the government and places a major risk for businesses (Markit 2020). Complex bureaucratic procedures pose major problems for investors. Protection of their rights is problematic as the judiciary is highly influenced and pressured by the ruling political class. The court system suffers from endemic corruption including bribery of judges and prosecutors, and likely to rule in favor of ruling elite including the president and his family (Markit 2020). Foreign companies operating or trying to enter Tajikistan's market encounter bureaucratic red tape because of the lack of transparency when applying for state tenders. There is no designated procurement law and state purchases are regulated by the governmental decrees (Markit 2020). Businesses face two types of corruption: petty corruption in the form of a "fee" or bribe by state officials at every level, and high-level corruption that usually occurs with large public contracts during the bidding process.

The first Law of the Republic of Tajikistan No. 100 On the fight against corruption was dated back in July 25, 2005. In August 7, 2020 the new Law of the Republic of Tajikistan No. 1714 On the fight against corruption was implemented. The head of the Anti-Corruption Agency, Suleimon Sultonzoda stressed that the draft law pays special attention to preventing corruption, which in practice is one of the most effective and efficient methods of combating this phenomenon.

Moreover, a new article appeared in the law that concerns collective decisions of a corrupt nature, so if a leader lobbies for his own interests or the interests of relatives, then he/she is fully responsible for the intentions of his subordinates [35].

At the same time, it cannot be said that over the past years, the Tajik authorities have not made attempts to fight against corruption. Since 2007, in order to combat corruption in Tajikistan, the Agency for State Financial Control and Combating Corruption was created by presidential decree. However, this agency is under political influence, and generally prosecutes mid- to low-ranking officials often those who have fallen out of favour with the ruling elite. In March 2015 President Imomali Rahmon appointed his then 27-year-old son, Rustam Imomali, as a head of the Anti-Corruption Agency in January 2017 Rustam Imomali was elevated to Mayor of Dushanbe, the national capital [36].

The first Anti-Corruption strategy No. 34 for 2008-2012 was adopted by the Decree of the Government of the Republic of Tajikistan on January 26, 2008. The strategy had some inherent significant shortcomings, such as lack of criteria for assessing the implementation of the Strategy and measures of its implementation, absence of a mechanism for monitoring and controlling the implementation of the Strategy, there was no earmarked funding for measures. After the expiration of the first Strategy in August 30th, 2013, the second Anti-Corruption Strategy in the Republic of Tajikistan for 2013-2020 was adopted [37] by the decree of the President of the Republic of Tajikistan No. 1504 which aimed to reduce the level of corruption in the country, regularly remove obstacles, create conditions for economic development, develop democratic values, and improve the well-being of the population. To achieve these goals, the strategy set a number of tasks, taking into account the analysis of the internal state, international experience and

[35] Fighting corruption in a new way: leaders will be punished for lobbying interests, 2020, https://tj.sputniknews.ru/20200621/borba-korrupciya-rukovoditeli-lobbirovanie-interesy-1031447245.html

[36] BBC News, Sarkorova A., "Son of Tajik leader Rahmon appointed mayor of Dushanbe", 2017, https://www.bbc.com/russian/news-38598174

[37] Decree of the President of the Republic of Tajikistan dated August 30, 2013 No. 1504 "On the Anti-Corruption Strategy in the Republic of Tajikistan for 2013-2020", https://online.zakon.kz/Document/?doc_id=31454916#pos=2;-115

recommendations of international organizations. Moreover, the strategy envisaged improving public administration, the mechanism for analyzing corruption risks in various sectors, the formation of e-government, access to information, the involvement of civil society institutions and a number of other measures that, according to international observers, have not been taken into account. Thus, in the OECD (2017b) report Anti-Corruption Reforms in Tajikistan published in 2017, the implementation of the strategy was subject to significant criticism. In particular, the document indicates the weak activity of public commissions, and the implementation of anti-corruption policy. The experts also pointed out that the legislative measures taken regarding the declaration of property of civil servants and their family members affected only administrative officials, but not the political ones. The non-transparent judiciary, lack of full access to information, criminal legislation and many other components of the anti-corruption strategy were also criticized. The Agency for State Financial Control and Combating Corruption itself became the subject of a big scandal in 2017. Since the end of April, a wave of arrests of former employees of the Agency for Financial Control and Combating Corruption has taken place in Tajikistan [38]. Sentences have already been announced against many of them. 17 employees of the Agency for State Financial Control were arrested on April 20th, 2017. 40 were detained on suspicion of involvement in corruption. Including the former head of the Investigation Department of the Agency for Financial Control and Combating Corruption of Tajikistan, Firuz Kholmurodzoda Kholmurodzoda, was arrested on April 22, 2017 after receiving a bribe. According to various sources, its size ranged from USD120 thousand to USD1 million. During the search, USD1.3 million, 6 kg of gold, 50 pairs of expensive suits and shoes were found in the house, the Tajik agency Akhbor reports [39]. In addition, it was revealed that

[38] Khurramov Kh., "Fighting Corruption in Tajikistan: Myth or Reality?", 2019, https://rus.ozodi.org/a/29944312.html

[39] Arrest of anti-corruption officials in Tajikistan: who was taken and what was found, 2017, https://centre1.com/tajikistan/arest-antikorruptsionerov-v-tadzhikistane-kogo-vzyali-i-chto-obnaruzhili/

Kholmurodzoda has 31 properties in Dushanbe, a house in Austria, two houses in the Chortut district and a summer residence in the Varzob district. Several Visa cards with accounts in foreign banks and nine fake passports were also seized from him. Based on the testimony of Kholmurodzoda, on May 1, the deputy of the Khujand Customs Department, Faridun Benazirov, was detained, who was allegedly one of the intermediaries in the transfer of bribes for Kholmurodzod and his high-ranking patron. Davlatbek Khairzoda (Khayrov) another former deputy director of the agency was detained at the border with Kyrgyzstan while trying to leave the country. USD35 million was found in his parental home. At the beginning of 2019 the head of the department Sulaimon Sultozoda said at a press conference that their department conducted 1 100 audits and revealed damage worth about USD70 million. At the same time, he noted that the employees of the anti-corruption department were not convicted of bribery [40].

Another case of corruption occurred with the deputy head of the Main Directorate for Investment Programming and Regional Development of the Ministry of Economic Development and Trade of Tajikistan, Askar Nuralizoda who received a bribe of USD500 thousand dollars for introducing the poultry farming development into the state investment program for 2016-2020 in Jaloliddin Balkhi, Khatlon region [41]. At the same time, according to the agency, Nuralizoda asked for a bribe in the amount of 10 percent of the total amount of the future grant - USD1 million. He was only paid half of the amount, and was to receive the other half after the grant was allocated. The arrest of Nuralizod was an unpleasant moment for the ruling People's Democratic Party of Tajikistan (PDPT), where he was the head of the economic department, and the leader of the party is President Emomali Rahmon himself [42].

Current President Imomali Rahmon has been in power of Tajikistan for nearly

[40] Khurramov Kh., "Officials-businessmen, classified information about income. Why can't corruption in Tajikistan be defeated?", 2020, https://rus.ozodi.org/a/30488646.html

[41] A major official in Tajikistan and 500 thousand dollars, 2017, https://centre1.com/tajikistan/krupnyj-chinovnik-tadzhikistana-zaderzhan-pri-poluchenii-490-tysyach-dollarov/

[42] A major official in Tajikistan and 500 thousand dollars, 2017, https://centre1.com/tajikistan/krupnyj-chinovnik-tadzhikistana-zaderzhan-pri-poluchenii-490-tysyach-dollarov/

25 years. Him and his family remain the dominance in Tajik politics. The ruling of Imomali Rahmon has been criticised for his authoritarian rule, spread of corruption and nepotism, as well as low economic growth which makes Tajikistan one of the poorest nations in post-Soviet republics. Recently the son of Emomali Rahmon, Rustam Emomali was unanimously elected as a speaker of the Senate the upper house of the parliament of Tajikistan Majlisi Milli [43]. Thus, de jure, he became the second person in the country. The culture of patronage and clan-based influence within the ruling elite means there is little prospect of high-level corruption being eradicated in Tajikistan, although donor-led efforts, such as the development of a one-stop-shop for business registration and the modernisation of the tax and customs agencies, may reduce the exposure of businesses to corrupt activity over the coming two years.

Since 2020 tax return registration has been simplified for civil servants in Tajikistan. The department has developed and launched a computer program for filing an electronic tax return using the Internet and the service Personal account of the taxpayer, which is posted on the official website of the Tax Committee under the Government of Tajikistan. According to the committee, the taxpayer's personal account allows the provision of a wide range of web services and links the tax system with other systems based on e-government principles [44].

Moreover, Tajikistan introduces from September 1, 2020 a Single Window for the of registration export-import operations [45]. The Single Window System provides a transition from paper to electronic document management. Using the system, an entrepreneur from anywhere in the world can submit necessary documents to obtain a permit and a certificate required for customs clearance. The program will automatically send it to the appropriate authorities, depending on the type of imported or exported goods. The introduction of a Single Window for

[43] BBC News, Ryskulova N., "Pattern of nepotism". Tajik president's son elected speaker of senate", 2020, https://www.bbc.com/russian/news-52336816

[44] New services of the Tax Committee for presentation declarations by civil servants, https://andoz.tj/Ahborot/Index/?id=1053&culture=ru-RU

[45] https://www.dialog.tj/news/tadzhikistan-vvodit-s-1-sentyabrya-edinoe-okno-dlya-registratsii

Registration of Export-Import and Transit Operations in the Republic of Tajikistan will contribute to the implementation of the concept of e-government, simplification and transparency of foreign trade and public services, and an improvement in the business environment.

TURKMENISTAN

Turkmenistan is a highly authoritarian state in Central Asian region under the power of the president Gurbanguly Berdymukhammedov. He had replaced Saparmurat Niyazov after his death in 2006 and continued similar style of government ruling. During his presidency, Saparmurat Niyazov promoted a cult of personality and was considered as the most totalitarian and repressive dictator. The level of corruption in Turkmenistan is one of the highest in the world. Moreover, during the presidency of Berdymukhamedov, who embarked on a course of softening government policy, the situation even worsened compared to the times of the authoritarian rule of Saparmurat Niyazov (1996-2006). In 2004 and 2006, the country was ranked 133 and 142 respectively (out of 163) in Transparency International's Corruption Index, and in 2011 - 177 out of 176. By 2016, the situation had improved slightly: Turkmenistan ranked 154th out of 176 and worsened again in 2019 with a score 165 [46].

The first anti-corruption Law of Turkmenistan dates back on March 1, 2014 No. 35-V [47]. This Law is aimed at reliably ensuring stability and security in society, expanding democratic principles, transparency and control in governing the state, at strengthening public confidence in the state and its structures, encouraging highly qualified specialists to enter the public service, strengthening guarantees of the honesty of state employees [48]. In June 2017, the State Service for Combating Economic Crimes was created in the country.

[46]Corruption Perception Index, 2020, https://www.transparency.org/en/cpi/2020/index/tkm

[47]Law of Turkmenistan dated March 1, 2014 No. 35-V "On Combating Corruption", https://online.zakon.kz/document/?doc_id=31526458#pos=1;-107

[48]Law of Turkmenistan dated March 1, 2014 No. 35-V "On Combating Corruption", https://online.zakon.kz/document/?doc_id=31526458#pos=1;-107

The fight against corruption is regularly voiced in the statements of the officials of Turkmenistan; however, the discussions do not go further on just acknowledging that corruption is an extremely negative and immoral phenomenon that poses a threat to the security of the state (Bortsova 2017). Detailed information on specific criminal cases is not published as well as statistical data are not disseminated (Bortsova 2017). State-owned media in Turkmenistan do not publish information on the level of corruption in the country [49].

Nevertheless, President of Turkmenistan Gurbanguly Berdimuhamedov in a festive address to the employees of the Ministry of National Security on the occasion of the 26th anniversary of this ministry said that the fight against corruption and bribery should be strengthened and these negative phenomena should be completely eradicated[50]. Earlier it has been reported some cases of the abuse of official powers in a number of ministries, facts of bribery and smuggling. In particular, anti-corruption checks were carried out in the agricultural complex and the state concern Turkmenhimiya, in the same year 2017 criminal cases were opened related to bribery and theft of state property [51]. In May 2017 investigations were announced against the former heads of the construction of the gas chemical complex of the Turkmengaz, as well as companies for the production of vegetable oil in Bayramali and the Bakharlyn cement plant [52]. In addition, some prosecutors were punished for corruption. According to the Risk Advisory Group Corruption Challenges Index 2019 Turkmenistan remains the country where business face the biggest corruption challenges, excessive bureaucracy and the need for "inside contacts" followed by Libya and Somalia [53], in part because the government does not disclose all its members (Jaeger 2018). Moreover, Turkmenistan's oil and gas com-

[49]Corruption in Turkmenistan in the spotlight of OSCE, 2019, https://rus.azathabar.com/a/30233882.html

[50]The head of Turkmenistan instructed to strengthen the fight against corruption, 2017, https://www.trend.az/casia/turkmenistan/2802458.html

[51]Corruption in Turkmenistan in the spotlight of OSCE, 2019, https://rus.azathabar.com/a/30233882.html

[52]OCCRP, The President of Turkmenistan instructed to strengthen the fight against corruption, 2017, https://www.occrp.org/ru/daily/7072-2017-10-03-07-54-27

[53]Corruption Challenges Index 2019, Press Release, https://www.riskadvisory.com/news/corruption-challenges-index-2019-press-release/

modities give rise to concern over the illicit enrichment of it political elite (Jaeger 2018). Vast gas reserves, which are the fourth largest in the world are the only economic advantage of Turkmenistan [54]. In recent years Turkmenistan has become dependent on gas exports to China, but the lower prices for gas has led to weakening of the government's financial position and the economy. The fight against corruption in the country is accompanied by the dismissal of officials, deprivation of their titles and awards, and often by public criticism and insults against them. In some cases, dismissed officials are arrested. Courts held behind closed doors and accused are forced to publicly confess in those crimes that they are prosecuted [55]. On October 1, 2019 Turkmen President Gurbanguly Berdimuhamedov fired the Interior Minister Iskander Mulikov, who was accused of abusing his position and was expelled from the courtroom. Despite the fact that Mulikov had received 12 severe reprimands, remained in his position for 10 years [56]. Research into the level of corruption is hindered by information secrecy: in particular, nothing is known at the official level about members of Berdymukhamedov's own family, as previously about members of Niyazov's family (Bortsova 2017). At the same time, anonymous sources from among the citizens of the country and foreign businessmen that conclude deals in Turkmenistan report that the president and his relatives have a decisive influence on the conclusion of any contracts in the gas and oil industry, construction and medicine (Bortsova 2017). Sources also claim that any day-to-day decision (entering a university, finding a good doctor) in Turkmenistan is not complete without a bribe (Bortsova 2017).

[54]Turkmenistan is late with plans to send gas to Europe, 2021, https://nangs.org/news/markets/turkmenistan-opozdal-s-planami-otpravity-gaz-v-evropu

[55]Corruption in Turkmenistan in the spotlight of OSCE, 2019, https://rus.azathabar.com/a/30233882.html

[56]Corruption in Turkmenistan in the spotlight of OSCE, 2019, https://rus.azathabar.com/a/30233882.html

Chapter 4

Theoretical approach

In the seminal model of Roy (1951) on self-selection individuals have skills in each occupation, but they can only use one skill or the other. In return, they self-select the sector that gives them the highest expected earnings and utility. At Roy's time, the presupposition was that the distribution of income that arises from economic processes is arbitrary. For example, if we compare two mean earnings in the government ($\overline{y_G}$) and the private ($\overline{y_P}$) sectors. Then the difference ($\overline{y_G}$ - $\overline{y_P}$) is an estimate of the earnings gain or loss that individuals would receive from switching from the private to government sector. Roy (1951) was the first to show that this view was incorrect. Implication of this finding was that self-selection should make a person skeptical of treating ecological correlations as causal. So, who chooses to work for the government? Employees who cannot find better jobs in the private sector? It is too simple, and probably wrong. Employees switch from government to private sector (and vice versa) and it is not a random subset of workers as workers have skills in each occupation, but they can only use one skill or the other (Roy 1951). That is why workers self-select the sector or occupation that gives them the highest expected earnings (and utility). This nonrandom allocation of workers creates selection bias problems (Ramoni-Perazzi and Bellante 2011). Equilibrium in each market equates supply and demand, while self-selection condition means that the marginal worker is indifferent between the two sectors (Roy 1951). Borjas (1987) paper presents a theoretical and empirical study on

"Self-Selection and the earning of immigrants" as a useful formulation of the Roy model. Immigrants in the United States are not just a random sample of the population from their home country. Due to endogeneity of the migrant decision the earnings of the immigrant population may differ from the earnings of the native population. In a more recent paper on the "Wage structure and the sorting of workers into the public sector" Borjas (2002) notes that the wage structure became uneven over 20 years among private and public sector employees. The relative change in wage structure suggests that private sector employees who are more skilled or have higher salaries will have fewer incentives to join the public sector. And public sector employees who are more skilled and or have higher salaries will have higher incentives to leave the public sector job and switch to the private sector. Employee's utility depends on three parameters:

- contractual monetary benefits–such as official wages;
- undocumented non-monetary benefits such as pro-social satisfaction and status, and
- undocumented monetary benefits—such as bribes and embezzlement.

In our paper we utilize the self-selection model by looking at the individuals in the labor market who choose to work for either the private or public sector. The *unobservable characteristics* that are pro-social and pecuniary motivated are (evenly) randomly distributed in this way that is possible to find any kind of people in any of the sectors. Embezzlement and pro-social can be substitutes or mutually exclusive depending on the model. Pro-social motivated individuals get higher satisfaction for working in the public sector. Pecuniary motivated individuals get zero pro-social satisfaction. Typology of pecuniary motivates they don't care where the money is coming from: the wage or embezzlement and they don't care too much about the pro-social preferences. As more bureaucracy reduces pro-social benefits and drives the good workers out of civil service and if corruption-aversion is a significant determinant of the success of anti-corruption

strategies, more paperwork will lead to more corruption and governments need to rethink how they wish to counter corruption.

There are two types of individuals based on *observable characteristics* both in private and public sectors that differ with respect to their productivity: high productive and low productive. One (proto/arche/ideal) type encompasses individuals who are proactive, creative and put their ideas upfront. They engage in trial and error in order to find something new or better. Most of the time they fail on their own time but whenever they succeed there is a spillover effect. Errors are small but benefits are large, private sector gains from that benefit and the company eventually becomes successful. Another (proto)type does not care about the content of his/her work. This person is more conservative in trial and errors, and more interested in fulfilling what he/she is instructed to do. For the marginal individual when someone assigns additional bureaucratic steps that require filing, reporting of any anti-corruption policy the work will be not attractive and that person will decide to leave the job because he/she will feel that he can utilize all his skills and abilities at another job. While for the second type, he/she will not mind the job and will stay and continue doing what he is instructed to do. Therefore, high skill workers leave the government for the private sector and low skill workers remain in government (Borjas 1987).

Looking at four different types of individuals in order to find how self-selection affects the outcomes both in the private and public sectors we are not making any assumptions about how the public sector is dominated by what type of people, we are just making a distinction between productivity that private sector rewards and measures productivity better than public sector.

1. Productive and pro-social.

2. Productive and pecuniary motivated.

3. Unproductive and pro-social.

4. Unproductive and pecuniary motivated.

The private sector is better at distinguishing between high productivity and low productivity. They employ both types of workers, and in some cases, they employ low productive workers and pay them low wages. Still, they don't distinguish between pecuniary and pro-social motivated individuals. In the private sector, wages depend on productivity; therefore, productive workers ($\overline{w}$) are paid higher wages than unproductive ($\underline{w}$):

$$\overline{w} > \underline{w} \quad \text{for all } s \geq 0$$

s – is unobservable pro-social.

The public sector, on the other hand, does not distinguish productivity that much. They pay a flat w. We assume: $\overline{w} > w > \underline{w}$. Moreover, the public sector does not have too many ways to distinguish between pecuniary and pro-social people. Still, we cannot assume that all are pro-social, and all are pecuniary motivated. More pro-socially motivated individuals are willing to join the public sector because, in addition to the wage, they feel like they are contributing to society. So, their s (pro-social) is high, and e (embezzlement) is zero because they don't want to steal from the public. Productive pro-socially motivated individuals need to have wage and pro-social benefit higher than the wage offered in the private sector; otherwise, he/she switches to the private sector: If $w + s > \overline{w}$, pro-social goes to public sector.

Typology of pecuniary motivated individuals is that they don't care where the money is coming from the wage or embezzlement; moreover, they don't care too much about s (pro-social). So, their s (pro-social) is zero, and e (embezzlement) is high. Productive pecuniary motivated individuals will stay in the public sector if his/her wage and embezzlement are greater than the wage offered in the private sector. If $w + e > \overline{w}$, corrupt goes to public sector. This leads to the possibility of a multiple equilibria. Positive sorting and negative sorting might yield to two different outcomes. Positive sorting - is when the relationship is positive between prosocial behavior and working in public sector. Negative sorting - is when the

correlation is negative. Positive sorting: pro-socially motivated individuals who reject higher payments in the private sector and keep working in the public sector dominate the public sector. Negative sorting: pecuniary motivated individuals dominate public sector, which leads to more corruption. Unproductive pro-socially motivated individuals will not switch to the private sector since their skills are not valued in the private sector, so they prefer to stay in the public sector.

$$w + s > \underline{w} \quad \text{Always true.}$$

Unproductive pecuniary motivated individuals will not switch to the private sector since their skills are not valued in the private sector, so they prefer to stay in the public sector.

$$w + e > \underline{w} \quad \text{Always true.}$$

Our focus here is on the choices of high-productive workers. Once we identify a common pattern among high-productive workers we can comment on the overall level of productivity in respective sectors. That is why looking at the selection effect in the private and public sector is important. Do workers choose public sector job because of pro-social preferences or because of the possibility of corruption? *If there are more unproductive pecuniary motivated individuals in the public sector than productive pro-socially motivated individuals in the public sector, then we have more corruption.*

Chapter 5

Comparative analysis

The literature from the laboratory experiments on self-selection is mixed (Hanna and Wang 2017, Barfort et al. 2019, Gans-Morse et al. 2020). These mixed results are due to the fact that self-selection into the public sector, has not been studied much.

In Chapter 5, we present comparative analysis of the results from similar recent experimental studies done in India, Denmark, Russia, Czechia and China to better understand the issue of self-selection and form strategies in response.

5.1 Dishonesty and Selection into Public Service: Evidence from India

To understand the public sector corruption and the role of the selection Hanna and Wang (2017) use experimental approach to measure dishonesty among public sector employees. They examine this idea by conducting a laboratory experiments and surveys among university students and government employees in India. Six hundred sixty nine senior year students (669) from 7 different universities participated in a laboratory experiment. In addition, to measure the real scale of corruption Hanna and Wang (2017) carried out the dice task with one hundred sixty five (165) government nurses to predict fraudulent absenteeism. Over two

years they collected the detailed indicators of absenteeism using random checks.

Moreover, to the dice task game Hanna and Wang (2017) conducted two more experimental games such as, the dictator game to measure the pro-social behavior and a message game to measure how much one is willing to lie for private gain.

Drawing on experimental games and surveys, Hanna and Wang (2017) find that students who cheat on laboratory experiment are more likely prefer to work in a public sector. The dice task game conducted among the government nurses also predicts the corrupt behavior, which helps in interpreting the student sample, so the dice task is a meaningful margin of selection. And in both samples the level of ability (high or low) does not make a significant difference in the predictive value of the dice task.

Results from pro-social preferences game show that students who reveal lower levels of pro-social behavior are more likely to prefer a government job.

The experiment on *dice task game* among students was conducted offline, at the university or other event places nearby. In the experiment the participants privately roll a six-sided die 42 times and record the outcome of the die after each roll. The participants were assured in privacy and could lie during the game if they preferred so. Although, the authors could determine how much the distribution of each individual's results differs from the uniform distribution.

In the *message game* participants make a choice of whether to send an honest message where receiver receives more money or dishonest message that indicates opposite. Again the privacy was assured and neither party knew who they were paired with.

In the *pro-social preferences game* Hanna and Wang (2017) use a dictator game to measure willingness to give to others (Camerer 2003). The instructions were that the students had to decide how much of INR 50 (about $ 1.125) they wanted to share between themselves and seven well-known charities of their choice.

To measure *cognitive ability*, a real world proxy for ability the authors employed two incentivized ability tests. During the first test on digit span memory,

participants listened to five rounds of series of digits and after ten seconds had to write the number down. With each round the numbers of digits increased by two. In the second test, adapted from Ariely et al. (2009) participants were given a set of matrices, with 12 numbers in each matrix and were asked to find two numbers in each matrix that add up to ten (10). They were given 3 minutes to solve all 12 matrices.

The statistical results from the laboratory experiments on dice task game present rampant cheating among students and less cheating among nurses. Students and nurses median points was 164 and 152 respectively compare to 147 theoretical median points. 34.2% of students and 9.4% of nurses reported 173 points which is above the 99th percentile of the theoretical distribution. Various features affected different outcomes in the dice task game, such as different settings: testing students in laboratory in university and testing nurses in real-world setting at work, different forms of payment: paying money to students and paying candies to nurses (since government workers could *not* receive cash).

Students who were more dishonest in the game or scored higher on the dice task game preferred government jobs. An increase in points by 1 standard deviation corresponds to an increase of 4.4 percentage points in the probability of preference for public office (significant at the 1 percent level). Students who had total points above the sample median are 6.2 percentage points more like to prefer public job than those below median (significant at the 10 percent level).

Dishonesty measured by the dice task game predicts the real world behaviors of public servants. An increase in points by 1 standard deviation corresponds to a decrease of 4.6 percentage points in attendance (significant at the 5 percent level). Government nurses who had points above the sample median are 10.7 percentage points more likely to be fraudulently absent from work than those below median.

In pro-social preferences game students chose to keep 59% of their endowment rather than donate to charity. An increase in the amount that participants keep for themselves by 1 standard deviation corresponds to an increase of a 4 percentage

point in in the probability of preference for public office (significant at the 5 percent level). So, students with higher pro-social preferences prefer private sector jobs over public. In the message game, on average the senders lied 1.71 times out of 3. Measuring cognitive ability, in matrix game students earned 2.25 out of 12 and in memory test students and nurses scored 1.68 and 2.66 respectively out of 5 and 9. Lying consistently in the message game is significantly correlated with the job preferences with a 95 percent confidence interval.

In short, paper by Hanna and Wang (2017) show that the variations observed in the levels of corruption, even under the same conditions and incentives, can be caused by differences in people's propensity to dishonesty. Therefore, screening and selection are additional tools in fight against corruption.

5.2 Sustaining Honesty in Public Service: The Role of Selection in Denmark

The types of individuals who select into public jobs can be different in places depending on the corruption level. Hanna and Wang (2017) in their paper suggest to look at different case where the corruption level is low and institutional structure is different compare to India. So, Barfort et al. (2019) are the first to study the self-selection of workers in a low-corruption country. Denmark is a benchmark country, with the world's least corrupt public sector [1].

To examine dishonesty and selection into public service Barfort et al. (2019) conducted laboratory experiments and surveys among the University of Copenhagen students. In total, eight hundred sixty two (862) students participated in experimental games. They adopted similar experimental methodology of Hanna and Wang (2017) but the only difference in dice-under-cup game is that the students could see the outcome of each roll before reporting their guess. So, they had an opportunity to misreport their guesses by winning dishonestly. Participants

[1] https://www.wonderfulcopenhagen.com/convention-bureau/copenhagen/denmark-least-corrupt-country-world

were asked to play 10 rounds of the dice guessing game at 4 different points. Students were first asked to pick a number from one to six and keep the number in mind, after the dice was rolled on screen, participants were then asked to report their guess while the actual outcome of the dice roll was still displayed. According to the results from dice-under-cup game Barfort et al. (2019) find opposite results as expected by Hanna and Wang (2017). Their results show that honest individuals choose public sector career in Denmark.

Results from the distribution of correct guesses show that 14-17% of participants were honest and cheat less than 2% of the time, 17-23% of participants were completely dishonest and cheat more than 98% of the time and the rest are spread evenly in between. Barfort et al. (2019) find that students who rank public administration as their job preference cheat 10 percentage points less compare to other students.

To measure pro-social preferences the authors also conduced a simple dictator game. Participants were given a gift of Dkr 15 (about $2.50). They were offered to either donate some or all money to one of the five charity organizations or transfer the money to their account. As a result, individuals who made more donations in dictator game were more honest and preferred public sector job more. Conversely, pecuniary motivated individuals who view wage as an important job characteristic are less honest and less likely to prefer public service job. So, increase in public sector wage may actually attract more dishonest individuals in public sector in Denmark.

As a proxy for ability the authors used students reported high school GPA. To measure the risk aversion; additionally, Barfort et al. (2019) included a coin-flip lottery. Participants were asked to choose between 5 different lotteries with varying risk profiles.

In short, the results from the experiment may explain why Denmark was able to maintain low level of corruption throughout this time. Systematic selection of honest individuals into public sector may explain such phenomena. Moreover,

Barfort et al. (2019) suggest that increasing wages to public sector workers may actually have unintended negative effects on the selection of honest individuals in to public sector career, but this is different in high and low corruption countries.

5.3 Self-Selection into Public Service: Evidence from Russia

When studying the role of self-selection into public service we find two different results in high- and low-corruption countries. In high-corruption country, such as India students who act dishonestly choose public sector more, while in low-corruption county, such as Denmark students who act dishonestly choose private sector jobs more. Gans-Morse et al. (2020) conduct similar experiments with students at two universities in Russia. And this is anomalous case because they find contrary results to similar study in India. Russia is a country where the corruption is widespread, but they find that students who prefer to work in public sector, cheat less in dice task game and are more pro-social in dictator game which coincides with Denmark case.

Gans-Morse et al. (2020) conducted two studies: in Moscow with undergraduate and masters students at five top universities in Russia from social science department and in Russia's Ural Federal District also with undergraduate and masters students from social science department. Data in Moscow was collected from May 27 to June 15 of 2016 with eight hundred and four students (804), and in regional study data was collected from December 8, 2017 to January 22, 2018 with three hundred seventy six (376) participants. To measure dishonesty and willingness to engage in corruption Gans-Morse et al. (2020) employed two games: dice task game and bribery game.

They used *Dice task game* to measure dishonesty developed by Barfort et al. (2019). In Moscow study participants played 20 rounds of the game at two points in the study resulting in total of 40 rounds. According to their analysis on average

people would guess correctly 6 to 7 rolls and earn around 265 rubles (about $3.5), if participants cheated in all rounds of the game they would earn around 600 rubles (about $8). Similar research instruments were used in Regional study except the incentive payments were reduced.

The *Bribery game* was built on Barr and Serra (2010) and measures several dimensions of a real-world bribery experience. Two players are randomly assigned to a role of citizen or a bureaucrat, and important part of the game is to observe if participant with a role of a citizen offers the bribe and if participant with a role of a bureaucrat accepts the bribe.

To measure the propensity for pro-social behavior Gans-Morse et al. (2020) employs a dictator game and Public Service Motivation (PSM) index that consists of a series of attitudinal questions. In dictator game similar to other papers, participants were allotted 400 and 200 rubles in Moscow and Regional study respectively, and had to choose how much they want to donate to one of the five charity organizations in Russia. According to the results of the dice task game, in Moscow and in Regional study on average participants cheated on about every fourth and second guess, with a sample mean of correct guesses of 15.4 and 21 out of 40 respectively. 3% and 6% of the Moscow and Regional study purely maximized their payoffs by reporting all 40 correct guesses. 70% and just over 82% of respondents reported 10 or more correct guesses.

In corruption game (or bribery game) 47% participants offered or accepted a bribe. Regional students cheated more than Moscow students, but they bribes less.

In donation game, both groups donated half of their initial endowment. In Moscow 11% of participants kept all Russian rubles for themselves and 18% gave away their full initial endowment, while in Regional study 10% of participants kept all Russian rubles for themselves and 19% gave away their full initial endowment.

To measure career preferences Gans-Morse et al. (2020) employ linear probabil-

ity model where 1 represents students who prefer public sector and 0 represents students prefer private sector. According to their results, logit models produce nearly identical results.

So, in short, the evidence from Moscow study shows that dishonest and selfish students self-select themselves into private sector. The findings in Moscow and Regional study largely converge. The results are puzzling since Russia's overall level of public sector corruption remains high, so how is it possible that dishonest individuals self-select themselves into private sector. Gans-Morse et al. (2020) provide several interpretations for such counterintuitive results and points to the importance for future research investigation.

First, they suggest that the trends could be different depending on the region where the experiment is held and how prestigious is the institution. Strong results in Moscow study could be due to the fact that these are the top-tier universities and alumni include some current ministries and deputy ministries. Gans-Morse et al. (2020) also refer to "islands of integrity", where aspiring civil servants are more motivated by public service ideals compare to their pecuniary motivated peers from other institutions. Second, the concern from the results show that dishonest participants choose private sector with the aim to engage in illicit rent-seeking opportunities. So, anti-corruption agencies should focus not only on bureaucrats but on private sector actors, who offer bribes to public sector workers. Third, such results could be due to declining pro-social tendencies among public sector workers Buurman et al. (2012). Young students at the beginning are optimistic about joining civil service and helping to improve society, but then throughout some time they become less optimistic, engage in corrupt acts or feel compelled to engage in corrupt acts from higher level officials. Fourth, authors findings indicate that there is a strong correlation between altruistic motivation and public sector employment in the budget sector, but students who aspire to federal government careers are more motivated by extrinsic motivation, such as salary than intrinsic factors, like their peers from private sector careers. This indicates the possibility

that corruption at the highest level plays an excessive role in Russia.

5.4 Selection effects on dishonest behavior: Evidence from Czechia and China

One of the recent papers on dishonesty and selection effects has been done by Houdek et al. (2021) who employed three experiments with overall sample size of two thousand one hundred twenty four (N = 2 124) participants. In experimental setting participants could choose the environment where they could cheat or cheating was impossible. The aims of the study was to examine the relationship between the selection of cheating and cheating-enabling environment as well as features of individuals who self-select themselves into a cheating-enabling environment. In all three studies authors found that participants with a higher propensity to cheat self-select themselves into a cheating environment.

In first study three hundred fifteen (315) Czechs and three hundred seven (307) Chinese participated in the study. Subjects had to predict the outcome of the fair die roll (even or odd). They played three rounds of the game with ten rolls in each round. There were two versions of the game: BEFORE - no cheating possible, and AFTER - with the possibility of cheating (baseline measure of cheating). The design of the game was as follows: in the first two rounds participants played both versions of the game in a random order. In the third round, participants were randomly assigned to either experimental or control group. And in control group they were randomly assigned to either AFTER or BEFORE version, in experimental group they were either offered to choose any version of the game or to be assigned to one of the versions at random.

The results show that participants who chose AFTER version in the round reported higher number of correct guesses than those who were randomly assigned, so dishonest people seek the environment where they could cheat. They found that Czechs cheated less than Chinese, but there were no differences in other

effects between two groups.

In the second study five hundred one (501) Czech university students participated in the game from humanities and social sciences and economics and management fields. In this study participants played five rounds of the same game as in Study 1 but with twelve rolls in each round. The first two rounds were similar as in Study 1, but before the third round participants read the short description of both versions of the game and then they chose what version of the game they wanted to play. One half of the participants could choose AFTER version without fee another half had to pay a fee for choosing AFTER version. The fourth round was similar to third but this time everyone were given the condition to choose fee or no-fee. In the fifth round participants were given a choice without any fees. The results from second study show similar results as in Study 1: people who choose cheating-enabling environment differ from those who do not, but unlike in Study 1, they did not find that "participants who chose the cheating-enabling environment cheated more afterward" (Houdek et al. 2021). Moreover, looking at psychological traits authors find that Machiavellianism and psychopathy people, one of the traits that forms the Dark Triad tend to choose the cheating-environment more. Introduction of a fee changed the behavior some of the participants, it decreased but the ones who chose the fee cheated more. This has important policy implication as entering or staying in cheating-enabling environment leads to more cheating (Houdek et al. 2021). Another interesting observation is that participants chose AFTER version more in the fourth round (with no fee) than in third round, the comparison of two states implies that as soon as cheating-enabling environment becomes easily accessible people are willing to choose it more because of no costs.

In the third study one thousand one (1001) English speaking participants were recruited from Prolific to participate in the experiment. The procedure of the game was similar to Study 1. Participants played three rounds of the game, but the game was predicting the outcome of two coin tosses. Each round had one trial.

In the first two rounds participants played both versions (BEFORE and AFTER) of the game in a random order. Before the third round participants read the short instructions and one half of the participants in experimental group get to choose the version they want to play while other half in control group were randomly assigned to one of the versions.

The results found in Study 3 confirm similar results found in Study 1 and 2. These finding confirm their hypothesis that cheaters self-select themselves into settings where cheating is allowed.

Houdek et al. (2021) paper differs a little compare to previous three papers I have discussed before. First three papers were mostly focusing on self-selection into public or private service, here authors were examining the overall "relationship between the selection of a cheating-enabling environment and cheating" (Houdek et al. 2021). This paper actually shows the importance of self-selection, especially its practical application to different companies and groups. Because if dishonest people with low moral values will choose to work in civil service or become politicians this may have high societal costs in future, and it is more beneficial to select honest and motivated individuals before hiring rather than trying to reduce dishonest people who have already made their choices (Houdek et al. 2021). These experiments show the importance of self-selection issue and its practical perspective.

Chapter 6

Data and Methodology

We follow Hanna and Wang (2017), where they find evidence of the selection of corrupt individuals for government jobs in India. They conclude that cheating in laboratory tasks predicts the corrupt behavior of public servants, which could be a predictor of future corruption. We adopt the experimental methodology of Hanna and Wang (2017) that is relevant to our study and apply their model to Kazakhstan data. As Hanna and Wang (2017), we examine the decision that an individual applies for a government position given the returns to various preferences and characteristics in public and private sectors.

The following model describes that i individuals with high-ability will apply to government jobs only if their stated wages, k; utility from public service, Pi, and utility from corruption Ci will be higher than the utility from their ability in the private sector. Since government wages, k is independent of ability, wages in the private sector, $f(Ai)$ increase with their ability. For a simple reason, it is also assumed that there are no returns to cheating behavior in the private sector. To enter the government, individuals in India take a civil service exam called the Union Public Service Commission (UPSC) Examination. They use the entrance exam as the difference between the revealed choice and expressed preferences. The civil service examination is a revealed choice.

$$k + g(Pi, Ci) > f(Ai) \tag{6.1}$$

High-skilled workers will prefer the public sector job if their utility from pro-social and corruption is higher than utility from their ability in the private sector.

There are several empirical research papers on experimental studies on honesty, cheating, and lying (Banerjee et al. 2015, Fischbacher and Föllmi-Heusi 2013, Gneezy 2005, Nagin et al. 2002). The dice task is originally adapted from Fischbacher and Föllmi-Heusi (2013). The experimental procedure of the game is following: each participant privately rolls a six-sided die 42 times Hanna and Wang (2017) and records the outcomes of the die after each roll. Observing more repetitions of the game helps to make statistical statements about the individual dishonesty (Barfort et al. 2019). The concern would be that more rounds of the game could cause subjects' behavior to change over time (Olsen et al. 2018) but Abeler et al. (2019) in their paper combining 72 experimental studies show that behavior does not change when subjects report repeatedly.

For each value of 1 reported, the participant is getting paid. The privacy is ensured, so the survey team is not aware if the individual has lied. Similar, with Hanna and Wang (2017, p. 268) since it is not possible to know who has cheated with certainty, we can determine "how far the distribution of each individual's outcomes is from the uniform distribution", which will provide the measure that is strongly correlated with doing so. The experiment helps empirically find the relationship between an individual's revealed level of dishonesty with the real world outcome and choices (Hanna and Wang 2017). The experiment has three advantages: first, the cheating cannot be detected; second, the experiment is easy to implement and third, it is possible to test different theoretical predictions (Fischbacher and Föllmi-Heusi 2013).

Moreover, we conducted a dictator game to measure pro-social behavior, such as willingness to give to others (following (Camerer 2003)) Hanna and Wang (2017). The dictator game is an experimental game where one participant (the dictator) receives an endowment and decides how much to split this endowment

with the anonymous participant (the recipient) (Leder and Schütz 2018). The recipient is a passive role so the only decision being made is the allocation of money from the dictator (Garcia and Brokaw 2018). After learning these rules the dictator can either give nothing or all the endowment to the recipient, as he/she is the one who makes the decision. Hanna and Wang (2017) have used the pro-social preferences game where they instructed the participants to divide the money between themselves and a well-known charity of their choice. Each donated unit of money to charity was doubled. Charities are interpreted as a measure of pro-social behavior that it is doing a good work and not a waste of money (Hanna and Wang 2017).

The dice task game in Hanna and Wang (2017) paper revealed the rampant cheating among the students in India. The reported median score by students was 168 points, while the theoretical median is 147. The dictator game also reveled non pro-social preferences among the students. Students chose to keep a greater percentage of the funds rather than donate to charity (Hanna and Wang 2017). The evidence shows that the college students who cheat on a game and those with low pro-social preferences are more likely to prefer to enter the public sector in India after graduation. These findings are important since they demonstrate the selection effect into the public sector.

We build our experimental framework upon Hanna and Wang (2017) and revised couple of components. The Dice task game and application of it looks more or less similar with Hanna and Wang (2017). Except the part that Hanna and Wang (2017) takes the entire sample group as a treatment group and in our sample we are able to immediately compare treatment and control groups. In pro-social preferences game we distinguish pro-social preferences with altruism and donation. This allows to discuss the connection between altruism and cheating in a detailed manner.

The main contribution to paper is to explore the link between one's propensities for corruption and pro-social preferences in addition to an extra bureaucratic

burden that affect the self-selection of workers. As more bureaucracy may or may not have an effect on pro-social benefits (*unobservable characteristics*), the responses to more bureaucracy are different by productive and unproductive workers (*observable characteristics*). Productive workers may quit the public sectors even having pro-social benefits since the productivity and wage are closely linked. Bureaucracy drives productive workers out of civil service and if corruption-aversion is a significant determinant of the success of anti-corruption strategies, more paperwork will lead to more corruption and governments need to rethink how they wish to counter corruption.

6.1 Participants

One hundred forty-six (146) subjects participated and completed the experiment. Our sample was drawn mostly from undergraduate and graduate students in Nazarbayev University of Nur-Sultan city. Out of the total number of participants sixty-nine (69) were male, seventy-seven (77) were female. Average age of the participants was 24 years old. Data was collected between May 20 and May 24 of 2021.

6.2 Design and Procedure

Experimental setup and the survey design was approved by the Institutional Research Ethics Committee (hereinafter–IREC) of Nazarbayev University. The experiment was administered in English using a custom-written Python program, Otree (Chen et al. 2016). The sample were recruited among Nazarbayev University students and alumni using flyers and invitation through e-mail and social media. The participation was considered voluntary. This means that even if the participants agree to participate, they were free to withdraw from the experiment at any time. Afterwards, the survey was sent to the interested participants. The URL for the survey did not include information that could identify individuals.

After registering individuals were given a randomly generated five-digit label which they used from beginning to the end of the experiment and the survey in order to collect their incentive payments. During no part of the data collection process, they were required to reveal their identities. Usually such experiments when testing students are conducted in laboratory settings, and involve bringing groups of people together in close proximity but due to COVID restrictions the experiments were conducted online.

All participants received a fixed amount of 2000 tenge or approximately 4.5 USD and had the opportunity to earn more, depending on their responses during the experimental games. On average, participants received approximately 14 152 tenge, or approximately 32 USD at the time of the study. It was made clear to participants that their payoffs for each of the experimental games were independent and that their total payoff would be the sum of their earnings from across the games.

The Dice Task. - To obtain an individual measure of dishonesty (see also (Fischbacher and Föllmi-Heusi 2013, Hanna and Wang 2017), participants were engaged in 20 rounds of the dice guessing game at two points in the study, for a total of 40 rounds. The reason why we conducted two rounds of the dice task game is that we wanted to see the learning behavior of the participants. If they play the game differently in the second round compare to the first round. We used the dice task game developed by Barfort et al. (2019). The main purpose of the experiment is to measure respondents' inherent propensities for dishonesty. Dice task game allows to analyze decision making in condition characterized by uncertainty. During each round the participants had an opportunity to earn money. The game rules are different depending on which group belongs the participant. In this session, the number of participants are divided equally randomly, and half of the subjects are in the control group (72 participants) and the other half in a treatment group (74 participants). In control group respondents were asked to imagine a dice roll, guess a number between 1 and 6, record the number they

had imagined and then click to the next screen. For correct guesses, participants earned money, for incorrect guesses, participants received 0 points. In treatment group participants could see the outcome of the dice roll; and therefore, had an opportunity to answer all rounds correctly to earn more money. (For more detail see Appendix A.)

The Pro-social Preferences Game. - To measure the pro-social behavior we employed both experimental and non-experimental approach. To measure willingness to give to others (see (Camerer 2003)) we employed a Dictator game - a variant of the Ultimatum game in which one player a Dictator makes an offer to Receiver. The Ultimatum game is played between two players, a Proposer (P) and a Responder (R). Proposer is given an integer amount $x by the experimenter. Proposer offers a share $s to Responder. If the Responder accepts the offer, then Proposer's initial offer is implemented and the payoffs of Proposer and Responder are $y_P = x - s$, and $y_R = s$ (Vojtěch 2021). The Dictator game (DG) is similar to the ultimatum game except that the Responder is passive and has no actions (thus, Receiver) - the dictator's offer is always implemented. If all decision makers had purely self-regarding preferences, then the prediction is that the dictator keeps all the money and offer none to the Receiver (Vojtěch 2021). In Ultimatum game because of the social norms people will always give something positive to the Responder as they will be afraid that the Receiver will punish them. But in the Dictator game this is not possible; therefore, the Receiver would expect that the offer will be zero. As there is no reason to give something to another person. Positive offer in the Dictator game indicates that: first, proposers are inequity averse or altruistic; second, higher offers in the Ultimatum game are made partly for strategic concerns such as fear of rejection because Responders may be inequity-averse.

In our experiment in Dictator game all participants had a role of a Dictator by default and had to decide how much to give to Receiver. The participants played five rounds of the game with 100 points each round with a total of 500 points and

had to decide how much do they want to keep and how much do they want to send.

Following (Gans-Morse et al. 2020), we also measured individuals' willingness to sacrifice financial gain for the benefit of society by utilizing the dictator game. We instructed the participants to divide 500 points between themselves and a charity of their choice from among five well-known, respected charities in Kazakhstan (DARA Charity Foundation, Saby Charitable Foundation, Public Fund ANA UYI, Charitable Foundation Niyet, Aruzhan Sain Public Foundation Voluntary Society Mercy). Actual donations were made in accordance with the participants' preferences.

Both Dictator game and Donation game can be interpreted as a measure of "pro-social behavior". So, technically these games are the same. Also participants could earn the same maximum amount of 500 points from each game. (For more detail see Appendix A.)

Besides lab experiments our data collection consisted of conducting survey questions, such as demographic questions including gender, age, class year, field study, home region, relatives occupation, family income and GPA (proxy for ability); business conduct questions on risk, bureaucracy, corruption and cheating in class. While pro-social preferences games offer data based on decisions with a direct financial impact on participants (Gans-Morse et al. 2020), it measures only a single dimension of pro-social behavior. We employed a 16-item version of the Public Service Motivation (PSM) index developed by Kim et al. (2012) taken from Gans-Morse et al. (2020) which consists of weighted and unweighted average of a series of attitudinal questions measuring four dimensions of PSM: 1) attraction to public services, 2) commitment to public values, 3) compassion, and 4) self-sacrifice. We asked respondents to rate Public Service Motivation attitudinal questions on a scale of 1 to 5, where 1 represents "Strongly Disagree" and 5 represents "Strongly Agree".

Additionally, we presented participants with a series of questions asking them

to evaluate the importance of 10 job attributes (Gans-Morse et al. 2020), including intrinsic attributes, such as valuing a job that improves society, helps others, or involves interesting work; extrinsic attributes, such as a high income, promotion opportunities, networking opportunities, or prestige; and pragmatic attributes, such as job security, good benefits, or a convenient schedule. We asked respondents to rate the importance of job attributes on a scale of 1 to 5, where 1 represents "Not at all important" and 5 represents "Extremely important". After, we grouped them and created three job attribute indices based on weighted and unweighted averages.

We measured career preferences in multiple ways like in Gans-Morse et al. (2020). The first dichotomous indicator for which respondents were asked to indicate which of the following best describes their career preferences: a job in public sector, a job in private sector, a job in international organization, a job in quasi-governmental sector or own business. After we asked what was the primary reason and motivation in choosing the previous section: better salary, job security and staff retention, better service to community, political connections and other. In the second approach we asked respondents to rate their likeliness of choosing specific career paths on a scale of 1 to 5, where 1 represents "Very unlikely" and 5 represents "Very likely". Nine career paths were evaluated: central government, state or local government, the government "budget sector" (e.g., public health, science, education, culture), private corporations, small or medium-sized business, ownership of a private business, banking or finance, consulting, and the non-profit sector (Gans-Morse et al. 2020).

To measure bribery we employed various questions related to ethical norms, potential harm to the society, if bribe is acceptable or not and created bribery index of weighted and unweighted average of a series of bribery questions. We asked respondents to answer and rate each question on a scale of 1 to 4, where 1 represents "Not acceptable" and 5 represents "Always acceptable".

Chapter 7

Results and discussions

7.1 Descriptive Statistics

7.1.1 Experimental Games

Before starting the primary analyses, in this section we provide Descriptive Statistics and Balance table of some of the main demographics variables. According to the Table 7.1 results the sample is balanced because t-test differences are not statistically significant. People in control group are similar to people in treatment group which means that the randomization worked well. The only note is that in treatment group we have less female and this is significant at 10% level but this is can happen due to chance.

Next, we provide the descriptive overview of the findings from experimental games that were designed to measure honesty and pro-social behaviors. As can be seen in Figure 7.1, payoffs in control group are normally distributed. The sample mean of correct guesses in control group is equal to 6.75 (see Table 7.2), the minimum is 3 and maximum is 11. Compare to Treatment group in Figure 7.2, the sample mean of correct guesses is equal to 22.53 (see Table 7.2) is equivalent to a cheat rate of 0.48 — in other words, on average participants cheated on about every second guess [1]. Table 7.2 presents and compares the main experimental and

[1] Following Barfort et al. (2019) each participant's reported number of correct guesses Y_i is a function of the number of dice rolls K = 40, the probability of a correct guess $p = \frac{1}{6}$, and individuals

non-experimental variables of two groups: control and treatment. The sample mean of amount kept in a Dictator game in control group is 309 points out of 500 and standard deviation is 101.54 compare to the sample mean of amount kept in Donation game in control group is 249.17 and standard deviation is 169.15. The sample mean of amount kept in a Dictator game in treatment group is 317.22 points out of 500 and standard deviation is 106.48 compare to the sample mean of amount kept in Donation game in treatment group is 226.49 and standard deviation is 183.63. As of Figure 7.2 five percent of the treatment group purely maximized payoffs by reporting 40 correct guesses in the dice task game. Twenty one percent reported 11 or fewer correct guesses - the amount of or lower than the number of correct guesses in control group, where participants do not have a chance to cheat. Approximately 78% of respondents in treatment group reported more than 11, despite the fact that the probability of honestly guessing right 11 is around two percent in control group.

In the second round of the dice guessing game the distribution of treatment group skewed to the right showing that participants who reported correct guesses in the first round reported more of correct guesses in the second round. This can be seen in observed distribution of treatment group in Figure 7.3 and Figure 7.4.

The distribution of Tenge kept after donating in both games can be seen in Figures 7.5 and 7.6.

People were willing to give more in donation rather than in dictator game. The average amount kept to themselves in donation was 237 compare to dictator 313. 24 people kept 250 points out of 500 in donation game compare to 46 people who kept 250 points out of 500 in dictator game. In Figure 7.6 39 people donated

ι's (unobserved) cheat rate θ_ι such that

$$Y_\iota = K(p + (1-p)\Theta_\iota$$

Rearranging produces the estimated cheat rate:

$$\hat{\Theta}_\iota = \frac{6}{5}(\frac{Y_\iota}{40} - \frac{1}{6})$$

Note that the cheat rates are perfectly correlated with the number of reported guesses (Gans-Morse et al. 2020)

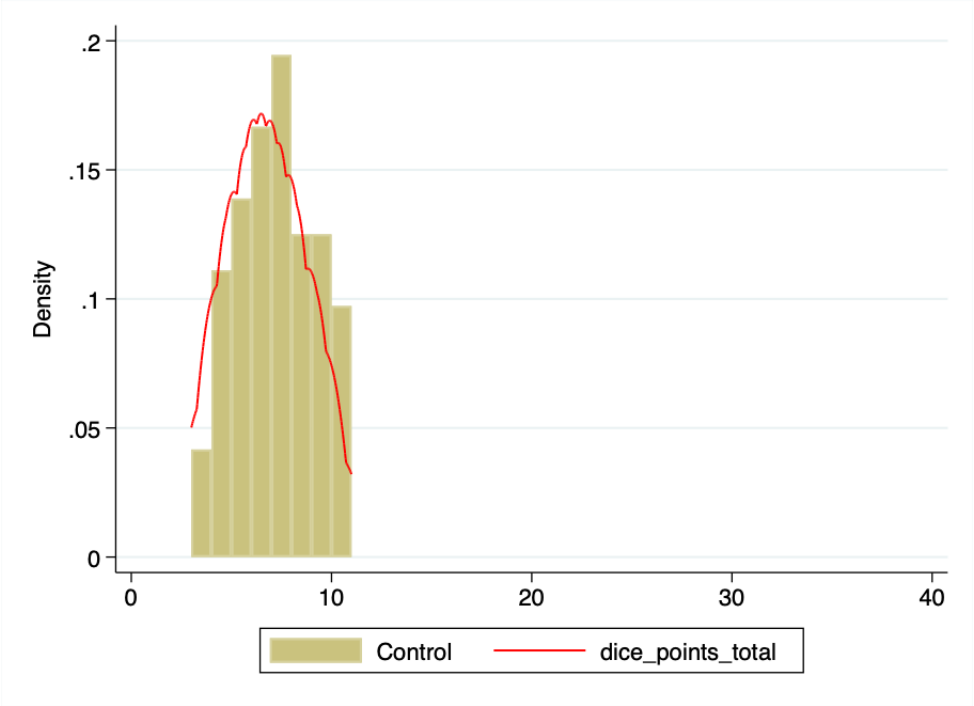


Figure 7.1: Observed distribution Control group (N=72)

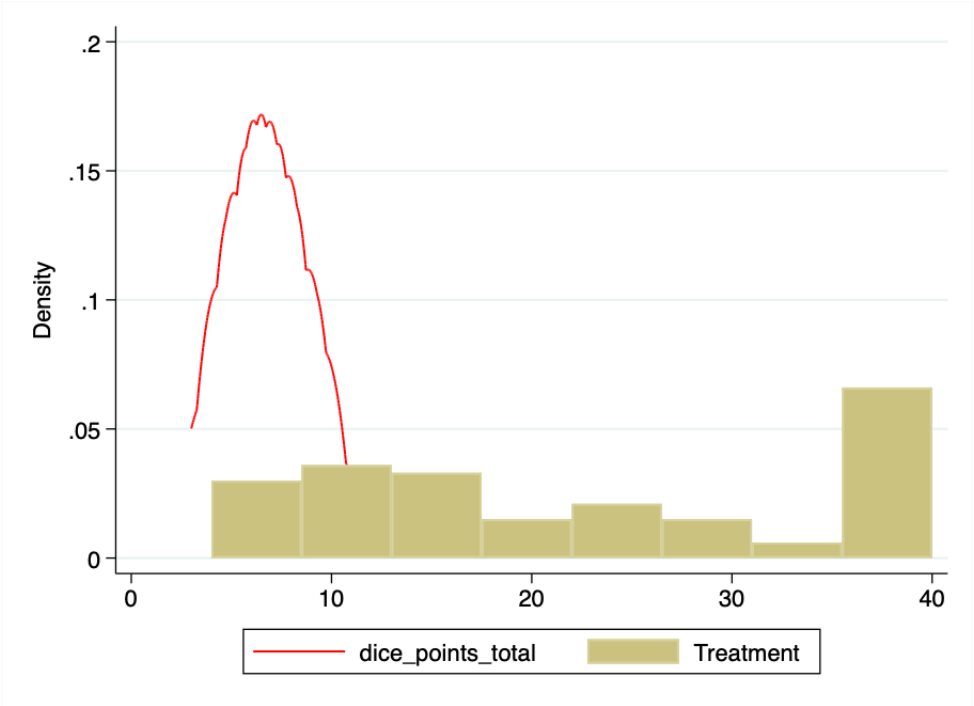


Figure 7.2: Observed distribution Treatment group (N=74)

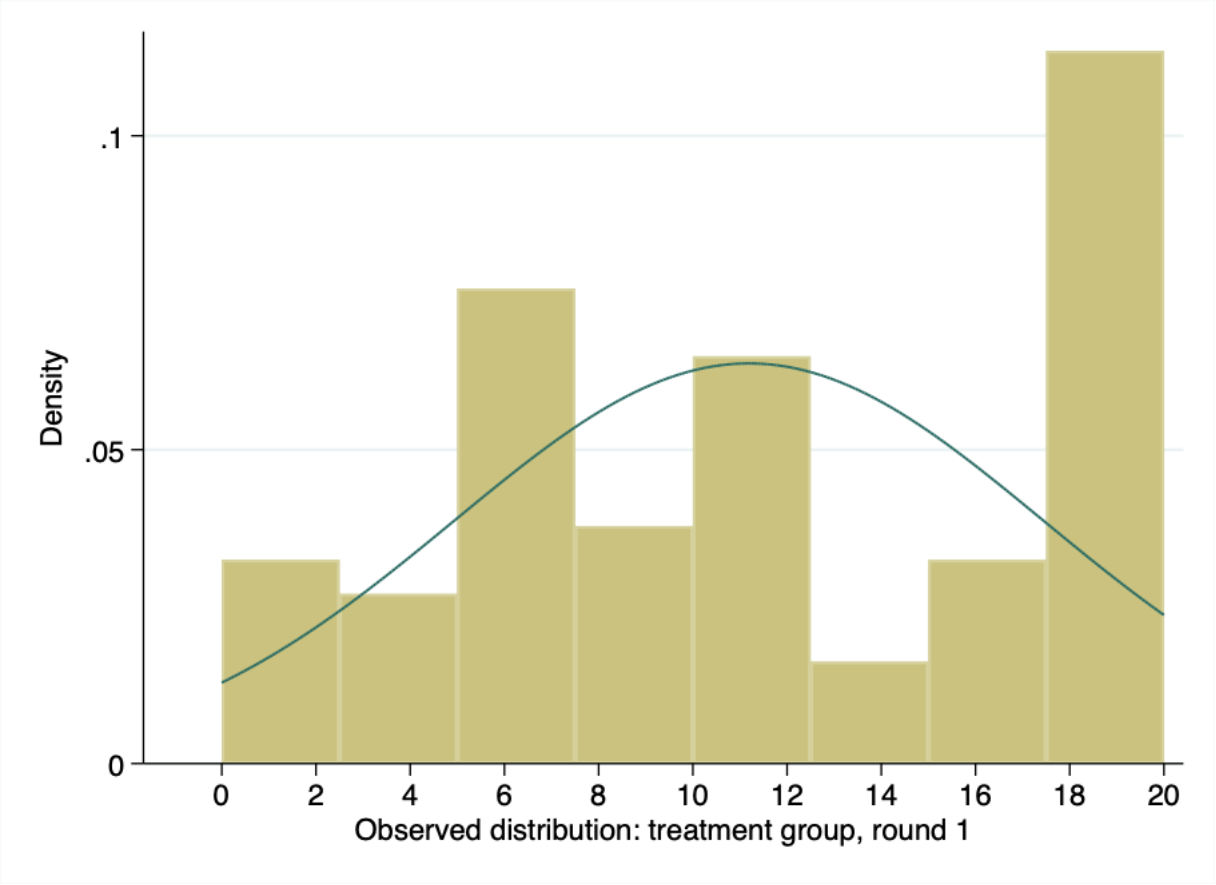


Figure 7.3: Observed distribution Treatment group r1(N=74)

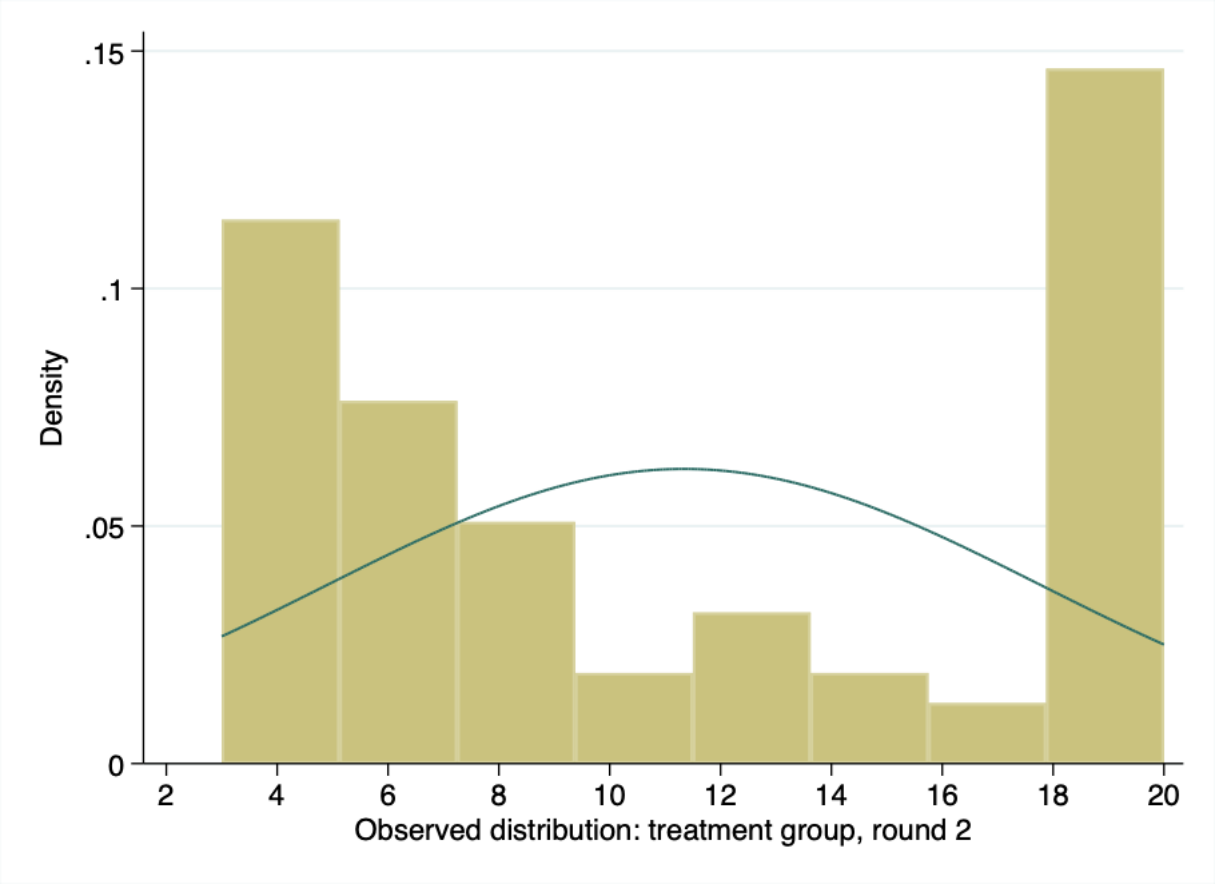


Figure 7.4: Observed distribution Treatment group r2 (N=74)

Table 7.1: Descriptive Statistics and Balance

Variable	(1) Control N	(1) Control Mean/SE	(2) Treatment N	(2) Treatment Mean/SE	(1)-(2) T-test Difference
Age of the respondent (years)	72	23.89 (0.44)	74	24.22 (0.45)	-0.33
Number of children	72	0.14 (0.07)	74	0.14 (0.06)	0.00
GPA (1=High, 4=Low)	72	0.88 (0.10)	73	0.99 (0.10)	-0.11
% Female (1=Female, 0=Male)	72	0.60 (0.06)	74	0.46 (0.06)	0.14*
% Married (1=Married, 0=Non-married)	72	0.21 (0.05)	74	0.19 (0.05)	0.02
% Student (1=Student, 0=Not a student)	72	0.68 (0.06)	74	0.64 (0.06)	0.05
% Employed (1=Employed, 0=Unemployed)	72	0.51 (0.06)	74	0.61 (0.06)	-0.09

Notes: The value displayed for t-tests are the differences in the means across the groups. ***, **, and * indicate significance at the 1, 5, and 10 percent critical level.

all 500 points (zero kept) compare to only 1 person in dictator in Figure 7.5. Major point in this analysis is that changing the labels changes the behavior of participants even if everything is identical. Therefore, dictator game is better in identifying the pro-social preferences than donation game. Average offers made by proposers in Dictator games are between 10-25% - these offers are lower than these in Ultimatum game, however, still much higher than zero (Forsythe et al. 1994). Across studies, the mean transfer made by Proposer is about 15-20% (Vojtěch 2021). In our case the average offer given in Dictator is 37% while in Donation game is 52%, which is much higher than average across different studies (Figure 7.11).

Only 7% of the Nur-Sultan study sample kept all KZ Tenge for themselves in Figure 7.7. In control group the average amount given to receiver was 191 points out of 500 points max compare to treatment group where the average amount

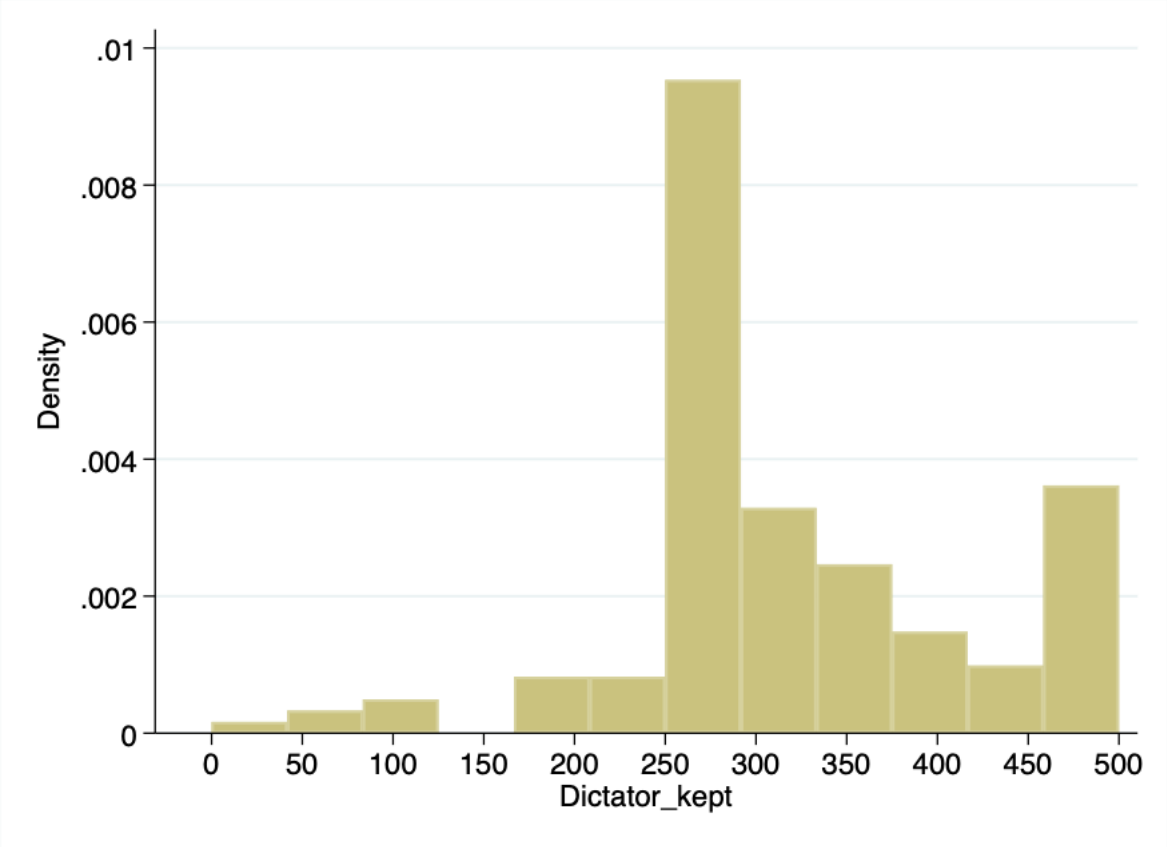


Figure 7.5: Observed distribution of Dictator kept

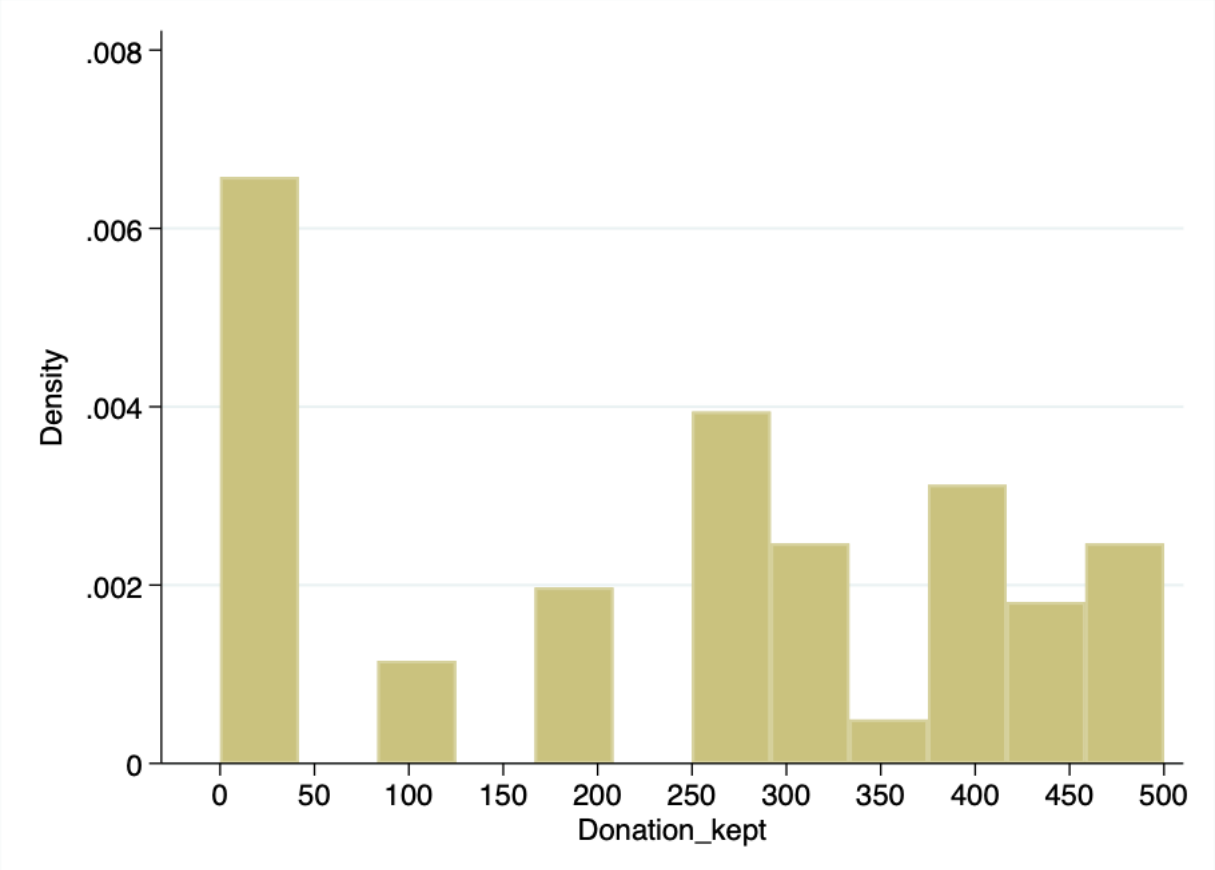


Figure 7.6: Observed distribution of Donation kept

Table 7.2: Descriptive statistics by groups

	Control			Treatment		
VARIABLES	N	Mean	SD	N	Mean	SD
I. Experimental variables						
Correct guesses (dice task game)	72	6.75	2.019	74	22.53	12.21
Dictator kept	72	309	101.54	74	317.22	106.48
Donation kept	72	249.17	169.15	74	226.49	183.63
II. Non-experimental variables						
Pragmatic attributes	72	3.977	0.660	74	4.045	0.656
Extrinsic attributes	72	3.434	0.658	74	3.449	0.668
Intrinsic attributes	72	3.889	0.678	74	4.041	0.796
Bribe index	72	1.293	0.611	74	1.314	0.621
PSM index	72	3.407	0.195	74	3.404	0.210
PSM weighted	72	16.53	1.019	74	16.54	1.122
II. Dependent variables						
Public	14	0.357	0.497	15	0.467	0.516
Public sector index	72	3.139	0.839	74	3.131	0.877
Central government	72	3.403	1.016	74	3.446	1.112
Budget sector	72	2.528	1.175	74	2.527	1.316
State or local government	72	3.486	0.993	74	3.419	1.159
Private sector index	72	2.575	0.573	74	2.529	0.623
Private corporations	72	2.042	0.680	74	1.973	0.721
SME	72	2.514	0.822	74	2.378	0.975
Ownership of a private business	72	2.264	1.113	74	2.297	1.082
Banking or finance	72	3.319	1.185	74	3.311	1.313
Consulting	72	2.736	1.289	74	2.689	1.281
Non-profit sector	72	2.708	1.093	74	2.824	1.064

Notes: *Correct Guesses* refers to the number of correct guesses reported in the dice task game in control and treatment groups. *Dictator kept* and *Donation kept* refers to money kept after giving away to receiver and donating to charity. *Pragmatic Job Attrib.*, *Extrinsic Job Attrib.* and *Intrinsic Job Attrib.* refer to the extent to which a respondent values the pragmatic, extrinsic or intrinsic attributes of a career. *Bribe index* is unweighted average of bribe variables. *PSM index* refers to the Public Service Motivation index. *PSM weighted* refers to the Public Service Motivation weighted average of PSM variables. *Public* Sector Preference is a binary indicator that takes a value of 1 for students preferring public sector and 0 for students preferring other employment. The Public Sector Index and Private Sector Index are unweighted averages of the public and private sector career preference variables, respectively.

shared was 183 points out of 500 points. Only one person in control group gave away their full initial endowment. Finally, with respect to donations made to one of the five charity organizations in Kazakhstan, only 9% of the Nur-Sultan study

sample kept all KZ Tenge for themselves. In control group Figure 7.8 the average amount donated was 269 points out of 500 points max compare to treatment group where the average amount donated was 297 points out of 500 points. Twenty seven percent gave away their full initial endowment. Particularly, 22 subjects and 17 subjects donated 500 points in treatment and control group respectively.

7.2 What predicts dishonesty in a dice task game? Honesty vs. Altruism

The choices of individuals depend on observable and unobservable characteristics. In this section we are focusing on unobservable characteristics such as pro-social motivation and embezzlement. Pro-social motivation is measured as *altruistic* and *selfish*. According to Wade and Breden (1980) "altruistic" behavior is characterized as an individual performing such behavior expends certain efforts or incurs certain costs not for his own benefit, but for the benefit of other relatives. A "selfish" person in this case is someone who does not exhibit altruistic behavior and thus does not incur any costs, while continuing to benefit from the actions of altruists (Wade and Breden 1980). We consider altruistic person as the one who donates or gives away most of the money and keeps almost zero (0) to himself/herself. Selfish person is the one who keeps most of the money to himself/herself and donates nothing or a little amount. Embezzlement is measured as *honest* and *cheater*. Honest is the one who plays the dice task game honestly. In a control group subjects do not have a chance to cheat so we cannot detect their honesty behavior. But in a treatment group we can observe that their results are significantly different from a control group, who does not have an opportunity to cheat. Cheater is the one who cheats in a dice task game by earning more points. First, we generated the dummy variable for being selfish. The maximum amount the participants can keep to themselves is 500 points in each game dictator and donation. We look at the extreme cases fist; therefore, we count selfish as the ones who kept 400 points

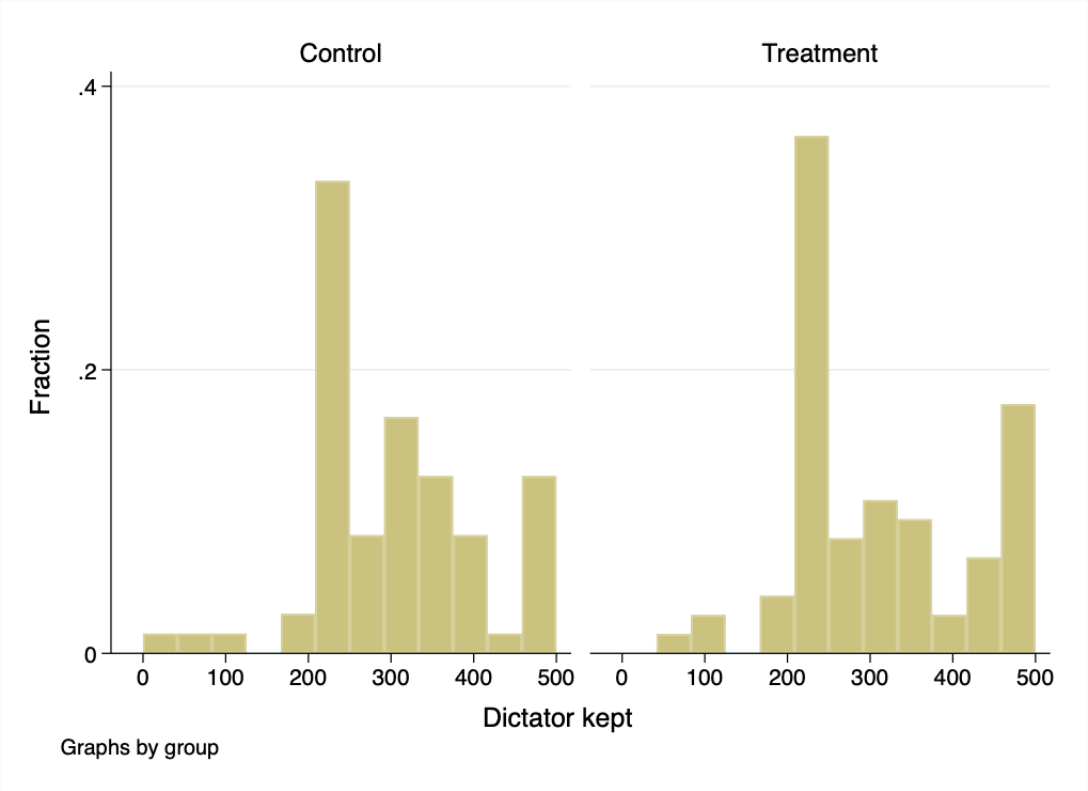


Figure 7.7: Observed distribution of Dictator kept by groups

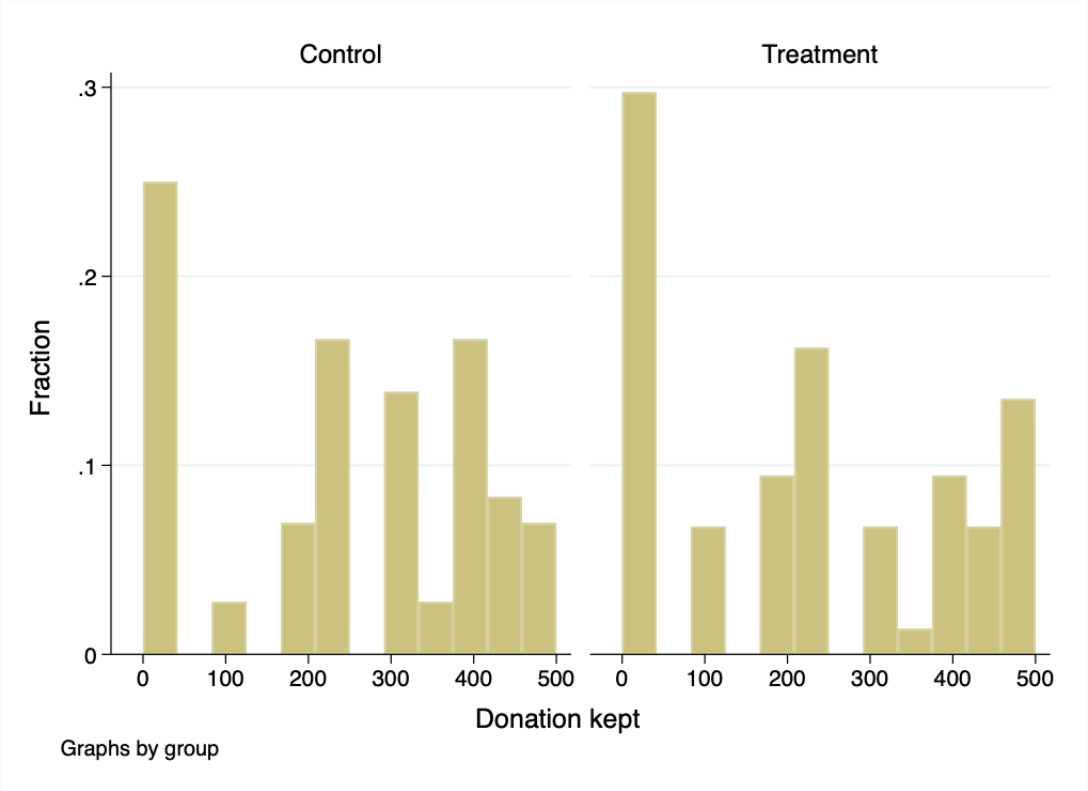


Figure 7.8: Observed distribution of Donation kept by groups

or more in each game for themselves. There are 45 and 35 people who kept more than 400 points in donation and dictator games respectively. We count altruistic as the ones who kept less than 100 points in each game for themselves. There are 47 and 4 people who kept less than 100 points in donation and dictator games respectively.

Second, we generated the dummy variable for being a cheater. The maximum amount the participants can earn in dice task game being in treatment group is 40 points. 11 points is the maximum payoff in control group, but since we have decided to look at the extreme cases first we take 13 points as being a cheater just to be sure (likelihood of cheating more). Therefore, there are 52 people who earned equal or more than 13 points in dice task game.

We count honest as the ones to earn less than 9 points (likelihood of cheating is really small). We do not claim them as honest, we just do not find evidence of their cheating behavior. So, there are 94 people who have earned less than 9 points during the dice task game (who are mostly in control group).

Now we are going to divide extreme participants from both donation and dictator games into four groups and see how many people are in each group and compare them:

1. Altruistic and cheaters;
2. Selfish and cheaters;
3. Altruistic and honest;
4. Selfish and honest.

The outcomes are the following.

Therefore, observing results from the Figure 7.9 we can claim that cheaters are more influenced by labels, as changing the labels change their behavior and this is not random. Cheaters donate more as soon as the labels are changed (16 vs 1). So, different ways of describing the same stimulus structure may produce different results (Cookson 2000). Another point is that people tend to be more altruistic in donation than in dictator game (47 vs 4). This can be seen in Figure 7.11. The

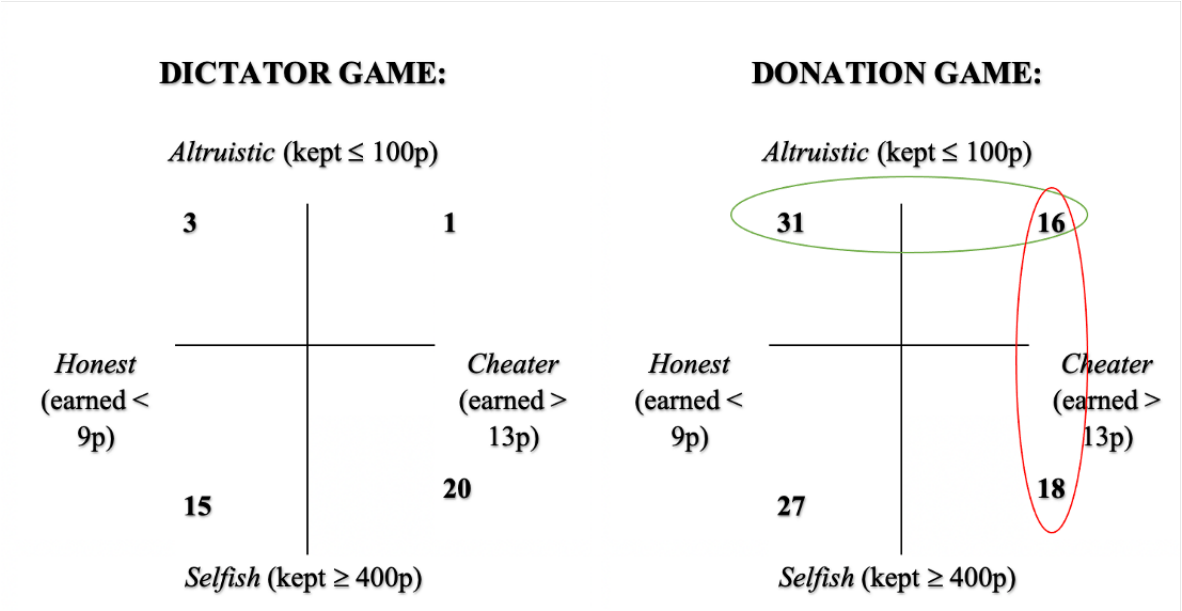


Figure 7.9: Honesty vs. Altruism. Extreme participants from both donation and dictator games.

Altruistic: who kept <= 100points. Selfish: who kept >= 400points.
Honest: who gained < 9points. Cheater: who gained > 13points in dice points total.

average percent of endowment to another person in dictator game is 37%, while in donation game the average percent of endowment is 52%. So, people are more willing to give to charity rather than to another person. This effect of labeling on honesty and altruism can be seen below in Table 7.3 when we analyse what predicts dishonesty in a dice task game. Moreover, in donation game we find that that we have almost equivalent amount of cheaters who are altruistic and selfish (16 vs 18). While in dictator game the difference is significant (1 vs 20). Figure 7.12 is similar to Figure 7.9 and shows overall idea of trends in a data set on dictator and donation games; it is an average of 10 people. It can be seen that 10 people moving average in black color which represents the donation game is higher than moving average in red color which represents the dictator game.

Both games dictator and donation are interpreted as a measure of pro-social behavior. Specifically, dictator game is explained as willingness to give to others while donation game connotes as willingness to give to charity for good work, not just waste of money. The only difference is in labeling or also called framing effect in experimental economics. Framing effect has a long been studied in experimental

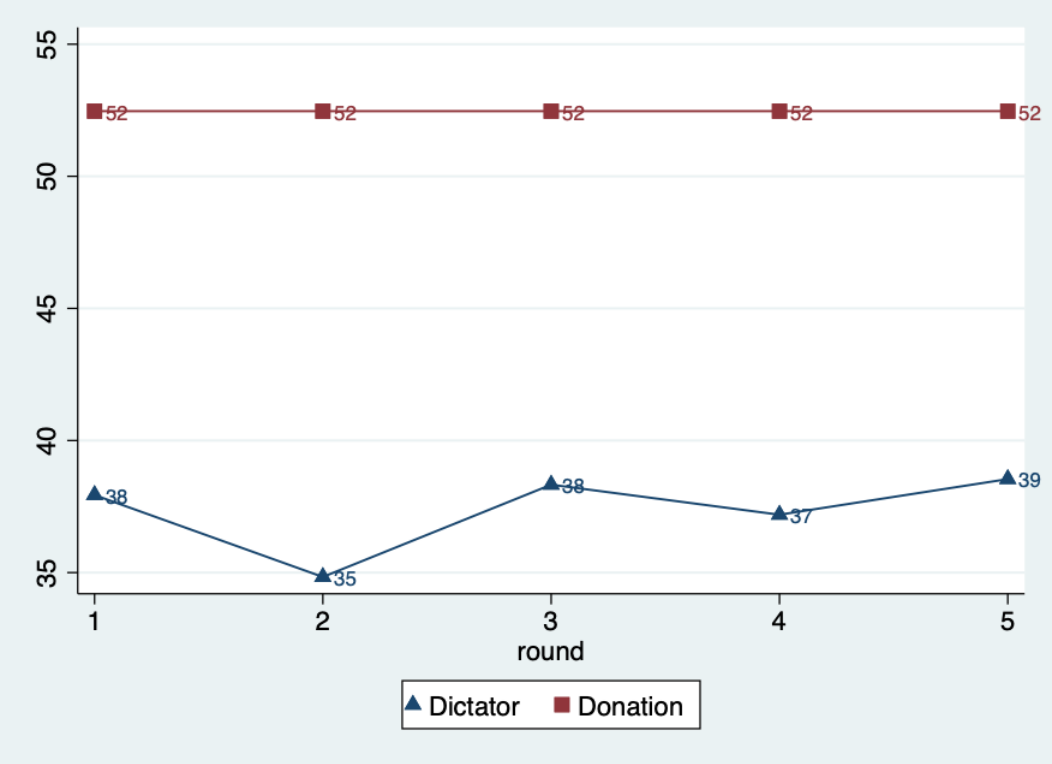


Figure 7.11: Percent of Endowment in Dictator and Donation games

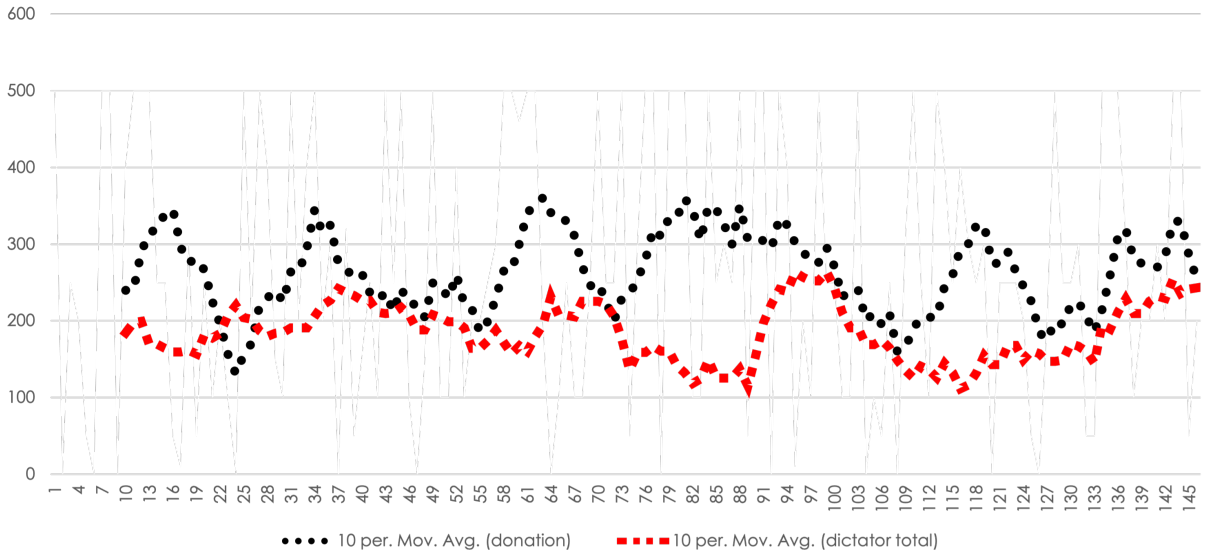


Figure 7.12: Moving Average Donation and Dictator Games

economics. Framing - a form of mental accounting - is the presentation of a problem in informationally equivalent ways that highlights different information cues (Vojtěch 2021). It is said that the framing effect is present when different ways of describing the same choice problem change the choices that people make (Cookson 2000), although the basic information and choices remain essentially the same. So, decisions that participants maid during similar pro-social preferences game depend on how the games were presented. According to (Fan 2017) framing effect is considered to be one of the most severe violations of normative utility axioms and thus is a strong indicator of irrationality, as individuals' preferences change when the same problem is formulated in different ways.

Findings in this paper have in common with other settings found in Andreoni (1995) paper where he investigated the effects of positive versus negative framing in a standard linear public goods setting. The result of the experiment demonstrate that people were willing to cooperate when the externality is positive rather than negative even though the potential outcomes are the same. Thus, different ways of describing the same stimulus structure may produce different results (Cookson 2000).

To obtain an individual measure of dishonesty we applied the dice task game (Hanna and Wang 2017) and examine factors that are correlated with it specifically with dictator game in first column and donation game in the second column (Table 7.3).

$$\begin{aligned} y_i = \beta_0 + \beta_1 x_i + \beta_2 never.cheat + \beta_3 corruption + \beta_4 network.public \\ + \beta_5 bribe.index + \beta_6 bribes + \beta_7 female + \beta_8 age + \beta_9 age^2 + \epsilon_i \end{aligned} \tag{7.1}$$

where,

- y = dice points total (which is total of correct guesses in a dice task game)
- x_1: donation = total amount of money kept in donation game.

- x_2: dictator = total amount of money kept in dictator game.
- never cheat = most college students never cheat survey question.
- corruption = corruption is a natural occurrence and part of our daily life, so denouncing it is unnecessary survey question.
- network public = networking is important for success survey question.
- bribe index = unweighted average of a series of 8 bribery survey questions.
- bribes = bribes are necessary to operate a business in Kazakhstan 1 survey question.

In Table 7.3 columns 1 and 2 the dependent variable is dice points total, which is a total of correct guesses earned in a dice task game). The regressions are estimated by OLS. As shown in column 1, participants who kept more money in dictator game (or appear less pro-social) are more likely to earn higher score or cheat in the dice task game. This is significant at the 5 percent level. This result is also in line with Hanna and Wang (2017, p.278) "students who appear less pro-social tend to be significantly more likely to cheat in the dice task". While keeping more money in donation game is positively correlated with cheating on the dice task, this is not significant at the standard levels. We can say with confidence that effect of labeling plays a big role in dictator game and affects on the results of KZT kept in pro-social preferences game. So, for future research we suggest to use dictator game instead of donation game as a standard game in experimental economics for predicting pro-social preference.

Additionally, we explore the relationships between personality measures, demographic questions and survey questions related to dishonesty. Among all the variables we observe a significant relationship between dice points total and corruption occurrence. People who agree more with the statement that "corruption is a natural occurrence and part of our daily life, so denouncing it is unnecessary" earn more in a dice task game. This is significant at the 5 percent level. So, people

who cheat in a dice task game are more likely to accept corruption. This finding in line with Hübler et al. (2019) who find positive relationship between cheating and the perception of prevalent corruption.

7.2.1 Non-Experimental Measures

Measuring Career Preferences

When presented a choice of a career preference 12% prefer the job in public sector (including quasi-governmental sector), 30% prefer the job in private sector (including owning a business), 58% prefer the job in international organization Figure 7.13. International organization preference was more pronounced in both sectors among other sectors. Most participants chose better salary as a primary reason and motivation in choosing their career preference 7.14.

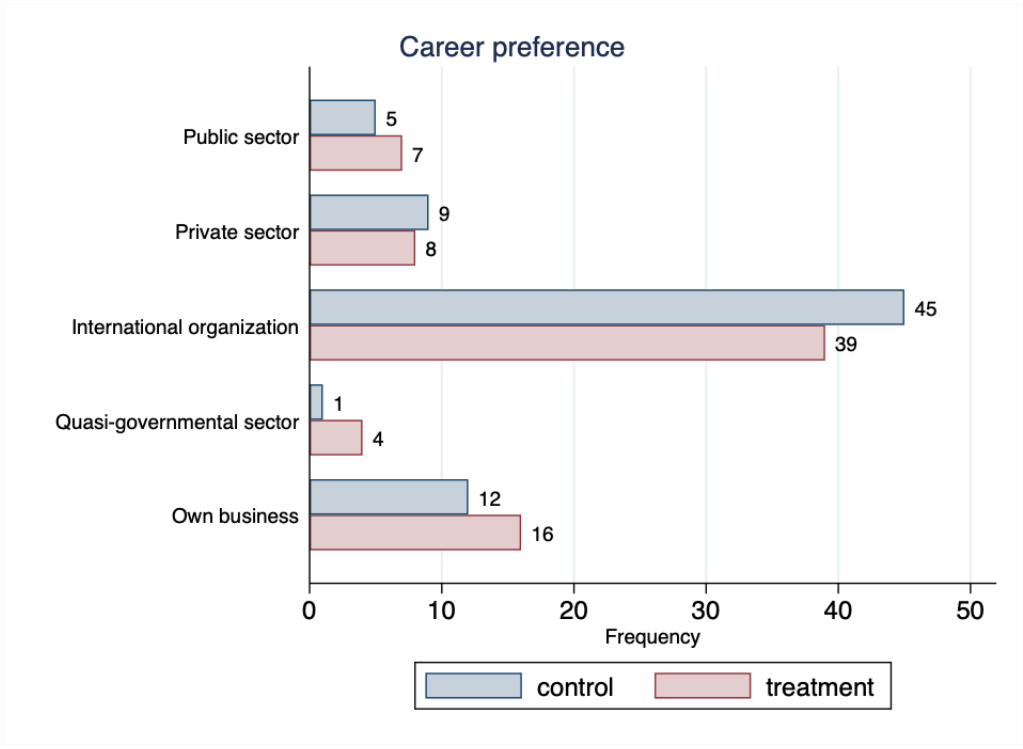


Figure 7.13: Measuring career preferences

However, as can be seen in Table **??**, participants expressed a much stronger preference for public sector employment in local and central government than in budget sector. On a scale of 1 to 5, where 1 represents "highly unlikely" and 5 represents "highly likely", participants on average rated their likeliness of

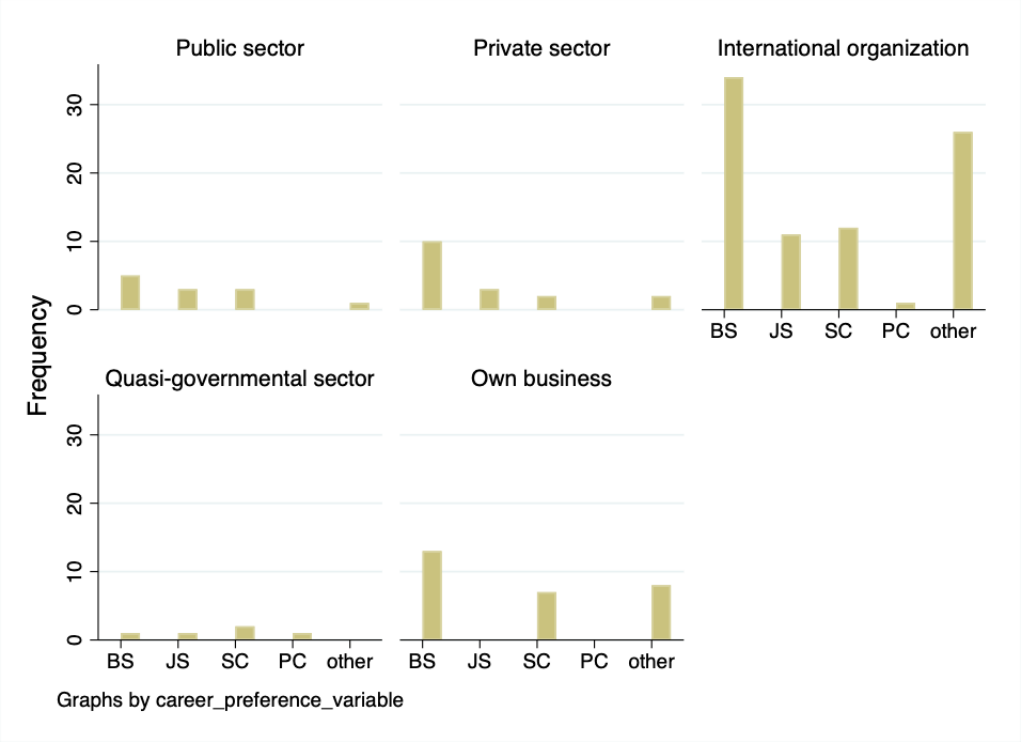


Figure 7.14: What is the primary reason and motivation in choosing the career preference?

Notes: BS. better salary, JS. job security and staff retention, SC. better service to community, PC. political connections and 5. other

choosing a career in local government is 3.452 and 3.425 in central government, compared to 2.527 for the budget sector. In private sector employment participants expressed a much stronger preference in banking and finance than in other private sectors. For example, participants on average rated their likeliness of choosing a career in banking and finance is 3.315, compared to 2.281 as ownership of a private business.

There is no difference in career preference between the groups. Participants expressed similar results. Accordingly, we constructed the public sector index and private sector index (Gans-Morse et al. 2020) as the weighted average of the public and private sector variables. (Creating weighted and unweighted indices produces similar results). [2] However, as can be seen in Table **??**, participants expressed a much stronger preference for public sector employment than private sector employment. Participants on average rated their likeliness of choosing a career in public sector is 3.135, compared to 2.552 in private sector.

Job attribute indices

Additionally we presented participants with a series of questions asking them to evaluate the importance of 10 job attributes grouped in three. In Table **??**, participants expressed a much stronger preference for pragmatic attributes. On a scale of 1 to 5, where 1 represents "Not at all important" and 5 represents "Extremely important", participants on average prefer job security, good benefits, or a convenient schedule over others. There is no difference in job attributes between the groups. Participants expressed similar results. Accordingly, we constructed pragmatic, extrinsic and intrinsic (Gans-Morse et al. 2020) as the weighted average job attribute indices. (Creating weighted and unweighted indices produces similar results). [3]

[2] *Unweighted: equal weights*: public sector index = (central+budget+state)/3 and private sector index = (private + SME + owner + banking + consulting)/5
Weighted: public = 0.31*central + 0.32*state + 0.37*budget and private = 0.13*private + 0.17*SME + 0.21*owner + 0.24*banking + 0.25*consulting

[3] *Unweighted: equal weights*: pragmatic = (job security + work hours + benefits package)/3, extrinsic = (high income + advancement + influential people + prestigious job)/4 and intrinsic = (interesting job + help job + useful job)/3
Weighted: pragmatic weighted = 0.32*job security +0.36*work hours +0.33*benefits package,

The questions and survey results from Job attribute indices can be found in Section 9.2.1 of Appendix B and Section 9.3.1 of the Appendix C respectively.

Public Service Motivation (PSM) index

First definition on Public Service Motivation was developed and published in Public Administration Review and stated that: "Public service motivation may be understood as an individual's predisposition to respond to motives grounded primarily or uniquely in public institutions and organizations" (Perry and Wise 1990, p. 368). "Attraction to public policy making, commitment to the public interest, compassion, and self-sacrifice were confirmed as dimensions of public service motivation" (Perry 1996). Public Service Motivation matters in a variety of respects: attraction and retention, job performance, ethical behavior and civic behavior (Perry 2017). In the beginning it mattered with respect to who comes to the government organizations or public service, types of incentives that organization needs to provide to motivate these individuals and also the performance of individuals in their work context (Perry 2017). Public service motivation makes a difference with respect to job performance. Ethical behavior is a factor linked to public service motivation. Universally we are interested in diminishing corruption which ultimately is related to peoples' behavior consistent with social norms, norms in the law and ethical expectations. There is a positive relationship with Public service motivation and willingness to do the right thing. Civic behavior, such as individuals willingness to vote, donate money. These are all important for developing civil service that is responsive to the interest of the public and interest of citizens.

In our research we are using 16-item measure of PSM developed by (Kim et al. 2012) which has combined the efforts of international PSM scholars. Table 9.1 presents weighted and unweighted results of Public Service Motivation index that compares mean and standard deviation of both groups. On a scale of 1 to 5, where 1 represents "Strongly disagree" and 5 represents "Strongly Agree",

extrinsic weighted = 0.18*high income + 0.21*advancement + 0.31*influential people + 0.29*prestigious job and intrinsic weighted = 0.26*interesting job + 0.36*help job + 0.38*useful job

participants answer attitudinal questions. In case of PSM index, creating weighted and unweighted indices produces different results [4]. Mean of unweighted PSM equals to 3.405, while mean of weighted PSM equals to 16.536. The questions and results on which the PSM index is based can be found in Section 9.2.1 of Appendix B and Section 9.3.3 of the Appendix C respectively.

7.3 Self-Selection and Career Preferences.

7.3.1 What predicts cheating in a dice task game?

In this section we will discuss the primary analyses of the study. Since our research is about self-selection in the job market, we specifically look at the effects on the outcomes in the public sector. We separately look at each career preference variable and then we further look at their detailed expectations. First, we want to find the effect of wanting to work in public sector over private sector on the points earned in dice task game. So, for the binary career preference measure, which takes a value of 1 for participants expressing a preference for the public sector and 0 for participants expressing a preference for the private sector, we employ logistic regression. The binary dependent variable is a number of correct guesses reported in the dice task game in control and treatment groups.

From Table 7.5 we can see that logit models produce different results for control and treatment groups. We see no significant results in control group but we see the significant result in treatment group. Therefore, we can say that participants (that were more dishonest in the task) who scored higher on the dice task game prefer public sector jobs over private sector. This is significant at the 10 percent level. Each additional correct guess reported in the dice task game is correlated with a

[4] *Unweighted, equal weights*: PSM index = (APP1+ APP2+ APP3+ APP4+ APP5+ APP6+ APP7+ CPI1+ CPI2+ CPI3+ CPI4+ CPV1+ CPV2+ CPV3+ CPV4+ CPV5+ CPV6+ CPV7+ CPV8+CPV9+ COM1+ COM2+ COM3+ COM4+ COM5+ COM6+ SS1+ SS2+ SS3+ SS4+ SS5+ SS6+ SS7)/33
Weighted: PSM weighted = (0.14*APP1 + 0.13*APP2 + 0.19*APP3 + 0.13*APP4 + 0.12*APP5 + 0.16*APP6 + 0.13*APP7) + (0.27*CPI1 + 0.24*CPI2 + 0.24*CPI3 + 0.26*CPI4) + (0.09*CPV1 + 0.11*CPV2 + 0.13*CPV3 + 0.12*CPV4 + 0.12*CPV5 + 0.12*CPV6 + 0.11*CPV7 + 0.09*CPV8 + 0.10*CPV9) + (0.19*COM1 + 0.17*COM2 + 0.12*COM3 + 0.21*COM4 + 0.13*COM5 + 0.17*COM6) + (0.17*SS1 + 0.14*SS2 + 0.15*SS3 + 0.14*SS4 + 0.14*SS5 + 0.15*SS6 + 0.12*SS7)

1.789 growth on the public sector preference index. This finding is in line with Banerjee et al. (2015), Hanna and Wang (2017) but contradicts with Gans-Morse et al. (2020).

Now we would like to to see what happens if we interact treatment with wanting to work in public sector. The binary dependent variable is still the same which is a number of correct guesses reported in the dice task game in treatment group. This effect is even stronger when we interact with treatment variable. So, for the binary career preference measure, which takes a value of 1 for participants expressing a preference for the public sector and 0 for participants expressing a preference for the private sector, we employ a logistic regression.

In Table 7.6 people who want to work in a public sector and are in a treatment group are more likely to cheat in a dice task game. This is significant at 1% level.

Distribution of correct guesses is different in control and treatment groups. We want to find what explains this; therefore, we run further regressions in treatment group. As in control group even if we find significant results they are not that meaningful because it does not receive an experimental treatment and serves as a benchmark in comparing the effects of a treatment to the experimental group.

Next, we want to find the effect of wanting to work in the public sector over quasi-governmental sector on the points earned in dice task game. So, for the binary career preference measure, which takes a value of 1 for participants expressing a preference for the public sector and 0 for participants expressing a preference for the quasi-governmental sector, we employ logistic regression.

Looking at the results from the Table 7.7 we see no significance of correct guesses on people who prefer public sector over quasi-governmental sector.

Following, we want to compare similar results with students seeking public sector employment to the traits of their peers seeking jobs in the international organization. So, we construct two regressions. First, for the binary career preference measure, which takes a value of 1 for participants expressing a preference for international organization and 0 for participants expressing a preference for

everything else, we employ logistic regression Table 7.8 column 1. Second, for the binary career preference measure, which takes a value of 1 for participants expressing a preference for the public sector and 0 for participants expressing a preference in international organization, we employ logistic regression Table 7.8 column 3.

Looking at the results from the Table 7.8 column 1 we cannot find a significant effect of wanting to work in an international organisation and cheating on a dice task game. The negative sign (-0.315) might suggest that people who want to work in an international organisations might cheat less, but we cannot say that with confidence.

From the Table 7.8 column 3 we can see that logit models produce different results compare to Table 7.5. We see no significance of correct guesses on people who prefer public sector over international organization.

At last, we want to find the effect of wanting to work in the public sector over own business on the points earned in dice task game. For the binary career preference measure, which takes a value of 1 for participants expressing a preference for the public sector and 0 for participants expressing a preference for to owning a business, we employ a logistic regression.

Looking at the results from the Table 7.9 we see no significance of correct guesses on people who prefer public sector over owning a business.

Previously we were looking at the effect of wanting to work in public sector over each four career preferences on the correct guesses earned in dice task game. Now we want to combine similar career preferences together and look at their effect. For the binary career preference measure, which takes a value of 1 for participants expressing a preference for the public sector and quasi-governmental sector and 0 for participants expressing a preference for the private sector and own business, we employ a logistic regression. We want to find the effect of wanting to work in combined public sector over combined private sector on the points earned in dice task game.

In Table 7.10 we don't find any significant results compare to Table 7.5. When we add quasi-governmental sector to public sector the effect of on the points earned in the dice task game disappears.

In conclusion we can say that when people have the opportunity to cheat they will cheat (see results from Table 7.6) and there is no clear connection between cheating and career preference in International Organization. Nevertheless, there is a connection between willing to be only in public sector and corruption. This has a potential for a future and larger experiment in order to analyse the difference in cheating behavior between people who want to be in the public sector and international organization.

Now we turn to our main regression. We want to find the effect of wanting to work in the public sector over private sector on the points earned in dice task game by adding some control variables to avoid Omitted Variables Bias. This regression is similar to the results from Table 7.5 and we just add some control variables. For the binary career preference measure, which takes a value of 1 for participants expressing a preference for the public sector and 0 for participants expressing a preference for the private sector, we employ logistic regression.

1. Effect of wanting to work in the public sector over private sector and being in treatment group on the points earned in dice task game.

$$\begin{aligned} y_i = \beta_0 + \beta_1 public + \beta_2 bribe.index + \beta_3 report.activities \\ + \beta_4 female + \beta_5 age + \beta_6 age^2 + \beta_7 GPA + \epsilon_i \end{aligned} \tag{7.2}$$

where,

- y = correct guess (which is total of correct guesses in a dice task game)
- public = the binary career preference measure, which takes a value of 1 for participants expressing a preference for the public sector and 0 for participants expressing a preference for the private sector.
- bribe index = unweighted average of a series of 7 bribery survey questions.

- report activities = reporting daily activities as part of a bureaucratic process that requires submitting a report to managers or supervisors is.

In Table 7.11 people who cheat on a dice task game are more likely to prefer public sector over private sector. This is significant at 1% level. Bribe index is negatively correlated with correct guesses in a dice task game and significant 1% level. Female are negatively correlated with the correct guesses in a dice task game, that means that female are less likely to cheat than male. It is statistically significant at 10% level. This result is in line with Hanna and Wang (2017), "males in the student sample appear to cheat significantly more in the dice task game (Hanna and Wang 2017, p.278)" and with Benistant et al. (2021) who investigated gender effects and found that males lied significantly more than females in die-under-the-cup task. Cohn and Maréchal (2018) find similar results in their laboratory experiment on coin tossing task with middle and high school students. Their results indicated that female students tend to cheat less then male students as they pocketed a lower number of coins; moreover, female students misbehave less frequently compare to men. GPA variable we are using as a proxy for ability and is positively correlated with the correct guesses in a dice task game. GPA variable is a reverse scale (1=High(4.00-3.50), 4=Low(2.50-2.00)). So, people with lower GPA tend to cheat more in a dice task game and this is significant at 5% level. This is consistent with Klein et al. (2007) who find the lower the GPA average and the younger the student, the higher the level of cheating. Burrus et al. (2007) also find similar result of cheating behaviors that is more prevalent for students with lower GPAs. Using the main regression we wanted to find the link between one's propensities for corruption and extra bureaucratic burden that affect the self-selection of workers. Therefore, we use report activities as a proxy variable for bureaucracy. The question states: reporting daily activities as part of a bureaucratic process that requires submitting a report to managers or supervisors. We do not find any effect of bureaucracy on self-selection of workers. Further research is required to investigate this issue.

Next, we run similar logit regression but in control group to see if we can find similar or different results. Compare to treatment group we do not find significant results in control group except for gender variable. In previous regression males were tend to cheat more than females. And in this regression which is run in control group we can see that Female are positively correlated with the correct guesses in a dice task game, that means that female are more honest than male. It is statistically significant at 10% level.

So, our main finding is that people who cheat on a dice task game (Table 7.11) are more likely to prefer public sector over private sector and this is significant in treatment group but not in control group.

7.3.2 What predicts career preferences?

In previous sub-section we discussed what predicts cheating in a dice task game where dependent variables was the number of correct guesses earned in a dice task game. In this sub-section we want to find what affects why participants want to work in public sector and any other sectors by looking at their career preferences.

1. Experimental indicators

$$y_i = \beta_0 + \beta_1 x_i + \beta_2 risk + \beta_3 female + \beta_4 age + \beta_5 age.sq + \beta_6 parent.public.employment + \beta_7 GPA + \beta_8 married + \epsilon_i \tag{7.3}$$

We run this regression three times where,

- y =
  - aggregate dependent variable: wants to work in public sector
  - disaggregate dependent variable: career preferences and expectation scale (central government, regional government, budget sector, etc.)/(private corporation, SME, ownership of a private business, banking, etc.)
- x_1: dice points = dice points (which is total of correct guesses in a dice task game)

- x_2: dictator = total amount of money kept in dictator game
- x_3: donation = total amount of money kept in donation game
- risk = risk aversion
- parent employment = 1 if one of the parents works in a public sector
- major = field study related to Public Administration [5]
- employment = works in public or quasi-gov sector
- public years= number of years worked in a public sector.

2. Treatment group, main model with causation

$$\begin{aligned} y_i = \beta_0 + \beta_1 D(T=1).points + \beta_2 dictator + \beta_3 donation \\ + \beta_4 risk + \beta_5 female + \beta_6 age + \beta_7 age.sq \\ + \beta_8 parent.public.employment + \beta_9 GPA + \beta_{10} married + \epsilon_i \end{aligned} \tag{7.4}$$

In Table 7.12 we run three regressions on original data with a sample size of 146 people. In the first regression people who prefer public sector over private sector are more likely to cheat in a dice task game. This is significant at 10% level. So, we can say that the reason why people choose public sector over private sector is the money motivation. Not only female are less likely to cheat than male (Table **??**) but being female also increases the preference in public sector job than in private sector. And this is significant at 10% level. We do not find any significance between choosing public sector and keeping more money in dictator game or donation game. This could be due to the small sample size. So, we did not find a link between keeping more money in dictator or donation games and career preference. While Hanna and Wang (2017) find that students in India who demonstrate pro-social preferences are less likely to prefer public sector jobs. But

[5] Sociology, Public Policy, Political Science and International Relations, PA, MBA, International relations, Finance, Economics

Lewis and Frank (2002), Steijn (2008), Gans-Morse et al. (2020) find that people who are driven by altruism are more likely to prefer public sector job.

Disaggregated analyses in Table 7.13, show that results concerning specific public sector career paths influence the overall sectoral trends. Subjects who prefer budget sector over all other three public sector career preferences kept more money in dictator game and this is significant at 1% level. So, employees receiving salaries from the state in sectors such as public health, science, education, and culture are less likely to be pro-social and we can be sure about that with 99% confidence interval.

Donation kept has a negative coefficient hence the negative relationship to central government job. Subjects who prefer central government are tend to be more pro-social in donation game. This is significant at 5% level.

Female is negatively correlated with the central government job, that means that female are less likely to choose central government job than male. It is statistically significant at 10% level.

Capital is also negatively correlated with the central government and state/local government jobs and this is statistically significant at 10% and 5% levels accordingly. That means that people who prefer central government and state/local government jobs are less likely to be from the capital.

Subjects who have a major related to Public Administration are more likely to choose Budget sector job. This is statistically significant at 5% level.

Public employment status is negatively correlated with state/local government job. That means that people who are employed in public sector currently are more likely not to choose state/local job for future career preference. This is statistically significant at 10% level. But again due to limitations of the data I cannot examine this effect directly in this study.

When looking at non-profit career preference only female variable is statistically significant. Female is also negatively correlated with non-profit career preference, that means that female are less likely to choose non-profit sector than

male. This finding is not in line with an extensive body of social science research that is relevant to non-profit (Themudo 2009). Most studies find that women are more public spirited than men and are more tend to volunteer and giving.

Now, we are going to analyse disaggregated analyses Table 7.13 concerning specific private career paths.

People who prefer consulting jobs are less likely to cheat in a dice task game. The variable interaction treat is negatively correlated with consulting career preference. So, people who want to work in consulting company are less likely to engage in corrupt activities.

Dictator kept has a negative coefficient hence the negative relationship to banking sector job. Subjects who prefer banking sector are more pro-social in dictator game. This is statistically significant at 10% level.

Subjects who prefer private corporation and SME over all other three private sector career preferences kept more money in donation game and this is significant at 5% and 10%level accordingly. So, employees who work in private corporations are more pro-social in donation game.

Female prefer SME more than male and this is statistically significant at 10% level.

Subjects who prefer Ownership of private business are more risk averse and this is statistically significant at 10% level.

1.2. Non-experimental indicators

$$\begin{aligned} y_i = \beta_0 + \beta_1 x_i + \beta_2 risk + \beta_3 female + \beta_4 parent.public.employment \\ + \beta_5 GPA + \beta_6 married + \beta_7 children + \beta_8 capital + \beta_9 income \\ + \beta_{10} major + \beta_{11} public.empl.sta + \beta_{12} public.years + \epsilon_i \end{aligned} \tag{7.5}$$

We run this regression four times where,

- y =
  - aggregate dependent variable: wants to work in public sector

  - disaggregate dependent variable: career preferences and expectation scale (central government, regional government, budget sector, etc.)/(private corporation, SME, ownership of a private business, banking, etc.)

- x_1: Bribes = Do bribes are necessary to operate a business in Kazakhstan?
- x_2: Bribe = bribe index
- x_3: PSM = Public service motivation
- x_4: Intrinsic = intrinsic career attributes (job interesting, helps society, etc)
- x_5: Extrinsic = extrinsic career attributes (high income, career promotion, etc)

Table 7.14 presents results using non-experimental indicators of bribe index, public service motivation, and respondents' evaluations of the importance of extrinsic and intrinsic job attributes when choosing a profession. So, overall we run four regressions.

Bribes variable is positively and strongly correlated with choosing public sector. So, people who prefer public sector jobs are more likely to agree with the statement that "bribes are necessary to operate a business in Kazakhstan". This is statistically significant at 5% level.

When looking at the results from Table 7.14 we find that respondents who value intrinsic job attributes, such as valuing a job that improves society, helps others, or involves interesting work are more likely to express a preference for the public sector. This finding contradicts with the findings in previous Table 7.12 where we didn't find any significance between choosing public sector and keeping more money in dictator game or donation game which is a measure of pro-social preferences. In the same regression we also find that these people who value intrinsic job attribute are more likely to be risk averse, have higher GPA and are not from the capital; moreover, their major relate to Public Administration.

Another regression is run with PSM index that is highly and significantly correlated with the public sector career preference. PSM index involves questions related to: (1) attraction to public service, (2) commitment to public values, (3) compassion, and (4) self-sacrifice. In Table 9.1 PSM scores are positively associated with public sector preferences.

In Table 7.16 PSM index is negatively correlated with budget sector, Non-profit and SME sectors. Even if in previous Table 9.1 we found that PSM index is highly and significantly correlated with the public sector career preference, this does not apply to budget sector in choosing the career preference.

Table 7.3: What predicts dishonesty in a dice task game?

VARIABLES	(1) Dice points total	(2) Dice points total
Dictator kept	0.0246**	
	(0.0100)	
Donation kept		0.0018
		(0.0061)
Never cheat	0.452	0.309
	(1.295)	(1.351)
Corruption occurrence	2.264**	2.427**
	(1.088)	(1.110)
Network public	1.226	0.880
	(1.525)	(1.577)
Bribe index	-0.431	0.650
	(1.798)	(1.787)
Bribes	0.530	0.601
	(0.913)	(0.937)
Female	-1.933	-1.797
	(2.132)	(2.194)
Age	1.962	0.803
	(3.109)	(3.152)
Age sq.	-0.0323	-0.0109
	(0.0553)	(0.0561)
GPA	0.675	0.454
	(1.236)	(1.271)
Married	-0.940	-1.766
	(2.988)	(3.062)
Capital	-3.424	-2.766
	(2.963)	(3.044)
Major	1.976	2.362
	(2.494)	(2.548)
Income level	-0.113	-0.133
	(0.553)	(0.569)
Public empl. sta.	2.572	1.890
	(3.151)	(3.212)
Parent public empl.	1.624	1.641
	(2.043)	(2.090)
Constant	-33.11	-10.27
	(44.24)	(44.24)
Observations	145	145
R-squared	0.143	0.103

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Notes: There is one missing value for GPA.

Table 7.4: Descriptive Statistics of Public Service Motivation index (n=146)

Dimensions and Items	**Control**	**Treatment**
	Mean Std. dev.	Mean Std. dev.
PSM index unweighted	3.407 0.195	3.404 0.210
PSM weighted	16.528 1.019	16.544 1.122

Table 7.5: Effect of wanting to work in the public sector over private sector on the points earned in dice task game

VARIABLES	(Control) Correct guess	(Treatment) Correct guess
Public over Private	0.00000831	1.789*
	(0.247)	(0.956)
Constant	-1.735***	-0.114
	(0.148)	(0.631)
Observations	560	600
Number of labelnum	14	15

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Note: 1 = Public sector and 0 = Private sector. *Correct guess* is a binary dependent variable refers to the number of correct guesses reported in the dice task game in control and treatment groups.

Table 7.6: Effect of wanting to work in the public sector and being in treatment group on the points earned in dice task game.

VARIABLES	Correct guess
Interaction treat	2.772***
	(0.668)
Constant	-1.210***
	(0.314)
Observations	1,160
Number of labelnum	29

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Note: 1 = Public sector and 0 = Private sector. *Interaction treat* is equal to participants who are in treatment group multiplied by wanting to work in public sector. *Correct guess* is a binary dependent variable refers to the number of correct guesses reported in the dice task game in control and treatment groups.

Table 7.7: Effect of wanting to work in the public sector over quasi-governmental sector on the points earned in dice task game

VARIABLES	(Treatment) Correct guess	(Control) Correct guess
Public over quasi-gov.	1.740	0.211
	(1.287)	(0.517)
Constant	0	-1.946***
	(1.003)	(0.478)
Observations	440	240
Number of labelnum	11	6

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Note: 1 = Public sector and 0 = Quasi-governmental sector. *Correct guess* is a binary dependent variable refers to the number of correct guesses reported in the dice task game in control and treatment groups.

Table 7.8: Effect of wanting to work in international organization and effect of wanting to work in the public sector over international organization on the points earned in dice task game

VARIABLES	(Treatment) Correct guess	(Control) Correct guess	(Treatment) Correct guess	(Control) Correct guess
Prefer international org.	-0.315	0.0985		
	(0.452)	(0.104)		
Public over international org.			1.278	-0.176
			(0.856)	(0.208)
Constant	0.764**	-1.657***	0.459	-1.558***
	(0.329)	(0.0830)	(0.326)	(0.0622)
Observations	2,960	2,880	1,840	2,000
Number of labelnum	74	72	46	50

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Note: *Correct guess* is a binary dependent variable refers to the number of correct guesses reported in the dice task game in control and treatment groups.

Table 7.9: Effect of wanting to work in the public sector over owning a business on the points earned in dice task game

VARIABLES	(Treatment) Correct guess	(Control) Correct guess
Public over own bus.	0.713	-0.184
	(1.021)	(0.232)
Constant	1.071*	-1.551***
	(0.558)	(0.120)
Observations	920	680
Number of labelnum	23	17

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Note: 1 = Public sector and 0 = Owning a business. *Correct guess* is a binary dependent variable refers to the number of correct guesses reported in the dice task game in control and treatment groups.

Table 7.10: Effect of wanting to work in the public sector with quasi-gov. sector over private sector and own bus. on the points earned in dice task game

VARIABLES	(Treatment) Correct guess	(Control) Correct guess
Public over Private	0.412	-0.141
	(0.710)	(0.205)
Constant	0.636	-1.627***
	(0.396)	(0.0931)
Observations	1,400	1,080
Number of labelnum	35	27

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Note: 1 = Public sector with quasi-governmental sector and 0 = Private sector with owning a business. *Correct guess* is a binary dependent variable refers to the number of correct guesses reported in the dice task game in control and treatment groups.

Table 7.11: Experimental indicators in treatment and control groups. Predictors of public sector career preferences.

VARIABLES	(Treatment) Correct guess	(Control) Correct guess
Public	2.117***	0.172
	(0.759)	(0.516)
Bribe tolerance index	-2.899***	-0.128
	(1.027)	(0.441)
Report activities	-0.147	-0.088
	(0.290)	(0.152)
Female	-2.405***	0.611*
	(0.905)	(0.328)
Age	-2.424	-0.724
	(1.512)	(0.519)
Age sq.	0.045	0.012
	(0.028)	(0.011)
GPA	0.862**	-0.217
	(0.413)	(0.157)
Constant	33.92*	9.157
	(20.02)	(6.179)
Observations	560	560
Number of labelnum	14	14

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Note: 1 = Public sector and 0 = Private sector. *Bribe tolerance index* Questions on acceptability of bribes. *Report activities* Reporting daily activities as part of a bureaucratic process that requires submitting a report to managers or supervisors. *GPA* reverse scale: 1=High(4.00-3.50), 4=Low(2.50-2.00). *Correct guess* is a binary dependent variable refers to the number of correct guesses reported in the dice task game in control and treatment groups.

Table 7.12: Experimental indicators. Predictors of public sector career preferences. Aggregate dependent variable

VARIABLES	(1) Public	(2) Public	(3) Public
Interaction treat	0.092*		
	(0.048)		
Dictator kept		0.007	
		(0.005)	
Donation kept			0.001
			(0.003)
Risk averse	0.416	-0.719	-0.184
	(1.351)	(1.265)	(1.206)
Female	2.327*	1.022	1.087
	(1.352)	(0.953)	(0.933)
Age	-0.682	-0.583	-0.508
	(2.739)	(2.338)	(2.113)
Age sq.	0.018	0.017	0.016
	(0.054)	(0.047)	(0.041)
Parent public empl.	-0.219	-0.527	-0.354
	(1.123)	(1.045)	(1.041)
GPA	0.504	0.488	0.570
	(0.568)	(0.567)	(0.580)
Married	1.332	0.476	0.843
	(1.509)	(1.379)	(1.358)
Constant	2.191	0.502	0.971
	(35.03)	(29.77)	(27.42)
Observations	28	28	28

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Notes: *Interaction treat* is equal to participants who are in treatment group multiplied by the number of correct guesses earned in a dice task game. *Risk averse* is a binary if participants considers himself as a risk averse in survey question.

Table 7.13: Experimental indicators. Predictors of public sector career preferences. Disaggregated Indicators

VARIABLES	(1) Central gov. job	(2) Local gov. job	(3) Budget sector	(4) Non profit	(5) Private job	(6) SME	(7) Owner	(8) Banking	(9) Consulting
Interaction treat	-0.0102	-0.0109	-0.0014	0.0039	-0.0017	-0.0095	-0.0069	-0.0119	-0.0146*
	(0.0063)	(0.0072)	(0.0079)	(0.0067)	(0.0052)	(0.0064)	(0.0075)	(0.0081)	(0.0081)
Dictator kept	-0.0006	0.0003	0.0028***	0.0009	-0.0005	0.0003	0.0002	-0.0022**	-0.0001
	(0.0009)	(0.0009)	(0.0009)	(0.0008)	(0.0006)	(0.0008)	(0.0010)	(0.0009)	(0.0009)
Donation kept	-0.0011**	-0.0008	-0.0002	0.0003	0.0007**	0.0008*	0.0001	0.0009	-0.0001
	(0.0005)	(0.0005)	(0.0006)	(0.0005)	(0.0004)	(0.0004)	(0.0006)	(0.0006)	(0.0006)
Risk averse	-0.0359	0.162	-0.0449	-0.105	-0.0129	0.175	0.382*	0.276	0.0778
	(0.192)	(0.204)	(0.234)	(0.212)	(0.140)	(0.194)	(0.213)	(0.245)	(0.257)
Female	-0.294*	-0.0713	-0.325	-0.538***	0.0360	0.282*	0.104	-0.0147	-0.240
	(0.173)	(0.184)	(0.208)	(0.187)	(0.131)	(0.147)	(0.179)	(0.229)	(0.229)
Parent public empl.	-0.162	0.194	-0.114	-0.283	-0.0437	0.0555	-0.238	-0.194	-0.0960
	(0.176)	(0.189)	(0.213)	(0.182)	(0.121)	(0.161)	(0.182)	(0.215)	(0.224)
GPA	0.0796	-0.0194	0.0320	0.149	-0.113	0.0023	-0.0100	-0.0256	0.138
	(0.107)	(0.110)	(0.128)	(0.104)	(0.0830)	(0.112)	(0.113)	(0.138)	(0.146)
Married	0.268	0.0395	-0.103	-0.140	-0.109	-0.272	0.146	0.136	-0.416
	(0.265)	(0.254)	(0.368)	(0.275)	(0.148)	(0.170)	(0.239)	(0.278)	(0.269)
Children	-0.104	-0.0744	-0.378	0.113	0.0320	-0.0403	0.406*	0.123	-0.192
	(0.218)	(0.253)	(0.261)	(0.252)	(0.121)	(0.214)	(0.215)	(0.287)	(0.173)
Capital	-0.392*	-0.424**	0.293	0.148	0.0603	0.115	-0.216	0.122	-0.112
	(0.224)	(0.209)	(0.355)	(0.273)	(0.168)	(0.228)	(0.236)	(0.299)	(0.300)
Major	-0.191	-0.308	0.630**	-0.141	0.173	0.139	-0.138	-0.159	-0.182
	(0.212)	(0.227)	(0.270)	(0.251)	(0.206)	(0.210)	(0.204)	(0.284)	(0.285)
Income level	-0.0075	0.0078	-0.0046	-0.0859	-0.0842***	-0.0326	-0.0777*	-0.0412	-0.133**
	(0.0457)	(0.0382)	(0.0628)	(0.0571)	(0.0312)	(0.0367)	(0.0420)	(0.0630)	(0.0691)
Public empl. sta.	-0.323	-0.565*	-0.291	0.168	0.0081	0.0039	-0.0858	-0.311	0.343
	(0.301)	(0.296)	(0.305)	(0.294)	(0.159)	(0.244)	(0.301)	(0.335)	(0.369)
Public service years	-0.0614*	-0.0416	0.00873	-0.0331	0.0242	0.0759**	-0.0014	0.0473	0.0557
	(0.0321)	(0.0379)	(0.0594)	(0.0324)	(0.0332)	(0.0346)	(0.0706)	(0.0422)	(0.0350)
Constant	4.286***	3.804***	1.832***	2.821***	2.445***	2.079***	2.470***	4.111***	3.306***
	(0.395)	(0.405)	(0.499)	(0.418)	(0.322)	(0.359)	(0.480)	(0.516)	(0.548)
Observations	145	145	145	145	145	145	145	145	145
R-squared	0.197	0.157	0.144	0.175	0.100	0.123	0.107	0.108	0.145

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table 7.14: Non-experimental indicators. Predictors of public sector career preferences

VARIABLES	(1) Public	(2) Public	(3) Public	(4) Public
Bribes to operate business	0.840**			
	(0.390)			
Bribe index		1.373		
		(0.941)		
Intrinsic			3.460***	
			(1.278)	
Extrinsic				0.0165
				(0.957)
Risk averse	2.321	0.990	3.842*	0.910
	(1.720)	(1.415)	(2.316)	(1.445)
Female	0.801	0.507	3.289	0.605
	(1.329)	(1.273)	(2.016)	(1.243)
Parent public empl.	-0.792	-0.473	-0.949	-0.511
	(1.274)	(1.328)	(1.437)	(1.369)
GPA	1.608	0.487	3.226**	0.817
	(0.999)	(0.938)	(1.329)	(1.070)
Married	-0.0435	0.149	-2.839	0.470
	(1.635)	(1.645)	(1.893)	(1.531)
Capital	2.458	0.841	12.81***	0.802
	(2.331)	(2.033)	(4.443)	(2.564)
Major	2.202	1.550	5.772**	1.520
	(1.523)	(1.427)	(2.288)	(1.473)
Income level	-0.467	-0.429	-1.303*	-0.536
	(0.377)	(0.324)	(0.735)	(0.409)
Public empl . sta.	-4.205*	-1.662	-7.417**	-2.293
	(2.277)	(1.895)	(3.703)	(2.311)
Public service years	1.021*	0.907**	0.945	1.044*
	(0.578)	(0.428)	(0.728)	(0.577)
Constant	-6.567	-3.044	-21.28**	-1.999
	(4.122)	(3.296)	(8.335)	(5.506)
Observations	28	28	28	28

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table 7.15: Non-experimental indicators. Predictors of public sector career preferences

VARIABLES	(1) Public
PSM index	13.93**
	(5.485)
Risk averse	2.829
	(2.950)
Female	-0.359
	(2.466)
Parent public empl.	-2.168*
	(1.210)
GPA	1.308
	(1.581)
Married	2.696
	(2.705)
Capital	3.879*
	(2.037)
Major	2.713
	(3.290)
Income level	-0.506**
	(0.222)
Public empl. sta.	-0.929
	(1.961)
Constant	-50.15**
	(21.10)
Observations	28

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table 7.16: Non-experimental indicators. Career preferences and expectation scale. Disaggregated Indicators.

VARIABLES	(1) centralgov_job	(2) localgov_job	(3) budget_sector	(4) Non_profit	(5) private_job	(6) SME	(7) owner	(8) banking	(9) consulting
PSM_index	-0.522	-0.607	-1.682***	-0.928**	0.208	-0.856**	-0.332	0.323	0.405
	(0.445)	(0.458)	(0.513)	(0.439)	(0.299)	(0.376)	(0.459)	(0.548)	(0.544)
risk_averse	-0.102	0.0865	-0.0719	-0.1000	-0.0333	0.110	0.347*	0.179	0.0755
	(0.198)	(0.204)	(0.228)	(0.195)	(0.133)	(0.167)	(0.204)	(0.244)	(0.242)
female	-0.192	0.00836	-0.225	-0.495***	-0.0243	0.307*	0.140	0.0225	-0.168
	(0.184)	(0.189)	(0.212)	(0.182)	(0.123)	(0.155)	(0.190)	(0.227)	(0.225)
parent_public_empl	-0.171	0.185	-0.0303	-0.224	-0.0699	0.0621	-0.241	-0.260	-0.129
	(0.182)	(0.187)	(0.210)	(0.180)	(0.122)	(0.154)	(0.187)	(0.224)	(0.222)
GPA	0.0426	-0.0562	0.0327	0.172	-0.0913	0.0350	-0.00874	-0.0299	0.133
	(0.109)	(0.112)	(0.125)	(0.107)	(0.0728)	(0.0917)	(0.112)	(0.134)	(0.133)
married	0.324	0.0248	-0.304	-0.237	-0.0997	-0.318	0.137	0.190	-0.295
	(0.264)	(0.272)	(0.304)	(0.261)	(0.177)	(0.223)	(0.272)	(0.325)	(0.323)
children	-0.0743	0.0251	-0.199	0.142	-0.0221	-0.0632	0.420*	0.105	-0.263
	(0.219)	(0.225)	(0.252)	(0.216)	(0.147)	(0.185)	(0.225)	(0.269)	(0.267)
capital	-0.520**	-0.530**	0.280	0.182	0.102	0.170	-0.202	0.184	-0.0271
	(0.255)	(0.263)	(0.294)	(0.252)	(0.171)	(0.216)	(0.263)	(0.314)	(0.312)
major	-0.259	-0.359	0.710***	-0.0698	0.155	0.133	-0.150	-0.186	-0.234
	(0.216)	(0.222)	(0.249)	(0.213)	(0.145)	(0.183)	(0.223)	(0.266)	(0.264)
income_level	-0.0422	-0.0325	-0.0602	-0.0977*	-0.0338	0.0161	-0.0743	-0.0602	-0.115*
	(0.0519)	(0.0534)	(0.0597)	(0.0512)	(0.0348)	(0.0438)	(0.0534)	(0.0639)	(0.0633)
employment_status	-0.0223	-0.0179	-0.0766	-0.0438	0.0664**	0.0486	0.00261	-0.0362	-0.000448
	(0.0455)	(0.0468)	(0.0524)	(0.0449)	(0.0305)	(0.0384)	(0.0469)	(0.0560)	(0.0555)
public_service_years	-0.0640	-0.0566	0.00707	-0.0187	0.0162	0.0648*	-0.0103	0.0395	0.0388
	(0.0388)	(0.0399)	(0.0447)	(0.0383)	(0.0260)	(0.0328)	(0.0400)	(0.0478)	(0.0474)
Constant	5.711***	5.865***	8.788***	6.541***	1.274	4.744***	3.585**	2.644	1.676
	(1.587)	(1.634)	(1.828)	(1.567)	(1.065)	(1.341)	(1.636)	(1.955)	(1.939)
Observations	145	145	145	145	145	145	145	145	145
R-squared	0.132	0.104	0.161	0.186	0.098	0.133	0.102	0.044	0.118

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Chapter 8

Conclusion

Kazakhstan is one of the key countries in Central Asia with the continuing legacy of the Soviet system in its public sector. It has also embarked upon an ambitious reform agenda to complete its transformation into a market economy. The literature made clear that corrupt transactions yield unreliable inspections and monitoring, and intensive waste of resources in the public sector. Policymakers need to account for self-selection when developing strategies for combating corruption. The public sector attracts individuals with a propensity for corruption, then corrupt self-selection may undermine the institutions that form the cornerstone of the rule of law and compromise the agencies responsible for combating corruption in society more broadly. Attracting candidates with integrity, and for filtering out candidates with unfavorable traits is only possible with a more transparent process that enhances the sphere of individual and economic freedoms, limited power to government and bureaucracy, free speech, open inquiry and the primacy of the rule of law.

We find evidence for a connection between a participants' preferences between public and private sector and their behavior patterns with respect to cheating and altruism. The results from experimental and non-experimental indicators concerning public sector preferences stand in contrast to results concerning private sector preferences. Cheating on a dice task game like in Hanna and Wang (2017) predicts corrupt behavior by civil servants, implying that it is a meaningful

predictor of future corruption. This paper is in contrast with anomalous case (Gans-Morse et al. 2020) on Russia. In Russia participants who prefer a public sector career display less willingness to cheat or bribe in experimental games as well as higher levels of altruism. While in case of Nur-Sultan we find evidence for self-selection into public sector by subjects who are more likely to cheat in a dice task game. And altruism has no significant correlation with public sector career choices. Women are less likely to cheat in a dice task game than men. This suggests that women civil servants might reduce corruption or appear less willing to engage in corrupt acts. People with lower GPA tend to cheat more in a dice task game. To obtain an individual measure of dishonesty we applied the dice task game and looked if it is correlated with pro-social preferences. We find that participants who appear less pro-social in dictator game are more likely to cheat in a dice task game. So, selfish people are more willing to engage in corruption. Moreover, we find positive relationship between cheating and the perception of prevalent corruption.

Additionally, it would be very beneficial to conduct similar validation exercise to measure a real degree of corruption among public sector workers in Nur-Sultan to see if the outcomes would coincide. But unfortunately due to budgetary and legal barriers we could not complete similar exercise.

Nevertheless, such experiments help to reveal unobservable characteristics of future public and private sector workers and that is why looking at the selection effect in the private and public sector is important.

Before discussing the broader conclusions from this research, it is important to note the limitations of this research. While the results of the study offer important insights into the relationship between willing to be only in public sector and corruption this research has some limitations. Due to small sample size compare to other research studies on similar topics it was difficult to identify significant relationships with some important variables in the data. The main contribution to paper was to explore the link between one's propensities for corruption and

pro-social preferences in addition to an extra bureaucratic burden that affect the self-selection of workers. We did not find any effect of bureaucracy on self-selection of workers. Moreover, drawing on experimental games we compare the behavioral, attitudinal, and demographic traits of subject seeking public sector employment to the traits of their peers seeking jobs in the private sector. And we find that altruism has no significant correlation with public sector career choices. This could also be due to the fact that we had small sample size and was using the data where the majority of participants chose international organization as a career preference which constitutes to 57% of the whole sample. Therefore, further research is required to investigate these issues.

More importantly, we can say with confidence that effect of labeling plays a big role in ultimatum games and affects on the results of KZT kept in pro-social preferences game. From the findings on honesty and altruism we can claim that cheaters are influenced by labels, as changing the labels change their behavior and this is not random. So, different ways of describing the same stimulus structure may produce different results (Cookson 2000).

People tend to be more altruistic in donation than in dictator game. The average percent of endowment to another person in dictator game is 37%, while in donation game the average percent of endowment is 52%. So, people are more willing to give to charity rather than to another person. For future research we suggest to use dictator game instead of donation game as a standard game in experimental economics for predicting pro-social preference.

Going back to our question in theoretical approach chapter: Do workers choose public sector job because of pro-social preferences or because of the possibility of hidden material benefits? In case of Nur-Sultan study we can conclude that workers in Kazakhstan are more likely to choose public sector because of pecuniary motivation. And if we have more unproductive pecuniary motivated individuals in the public sector than productive pro-socially motivated individuals in the public sector, then we have more corruption. By analyzing the impact of self-selection on

public sector outcomes, we can also say that corruption in Kazakhstan persists *not* because anti-corruption policies are inadequately implemented but because they fail to address the root causes of corruption. And self-selection of workers based on observable and unobservable characteristics can actually help in solving this issue. Because if dishonest people with low moral values will choose to work in civil service or become politicians this may have high societal costs in future, and it is more beneficial to select honest and motivated individuals before hiring rather than trying to reduce dishonest people who have already made their choices (Houdek et al. 2021). These experiments show the importance of self-selection issue and its practical perspective.

Corruption in Kazakhstan is a systemic problem; therefore, it cannot be treated with individual-level solutions (Gans-Morse et al. 2018) in the long term. Quah (2007) in his work on assessing the effectiveness of the Anti-corruption agencies in four countries, such as Singapore, Hong Kong, South Korea and Thailand establishes why Anti-corruption agencies are more effective in curbing corruption particularly in Singapore and Hong Kong. First of all country needs to have a political will, favourable policy context and able to equip Anti-corruption agencies with adequate powers, personnel and funding. Second, apart from these, such successful country cases have small population, stable governments, high standard of living, efficient civil service systems, and well developed infrastructure (Quah 2007). Moreover, Quah (2007) suggests additional necessary conditions for the success of Anti-corruption agencies: (1) the incorruptibility of anti-corruption agencies; (2) independence from the police and political control; (3) comprehensive anti-corruption legalisation; (4) adequate staffing and funding; (5) capability to impartially enforce anti-corruption laws; (6) commitment from the government itself to curb corruption.

Gans-Morse et al. (2018) also researches the effectiveness of the majority of anti-corruption policies by studying around 600 articles and reviewing 220 studies. They examine seven policy categories and draw four main conclusions. First,

adequate civil service salaries are necessary but insufficient to fight corruption. Second, successful anti-corruption policies that relate to monitoring, such as anti-corruption audits, independent investigative journalism and e-governance. Third, despite the fact that anti-corruption agencies are promoted for the last twenty years, scholars express skepticism about their efficiency and effectiveness. Fourth, more research is needed to assess the effectiveness of Anti-corruption agencies. Moreover, different policies have different goals. Anti-corruption agencies are created in such way to reduce the overall national level of corruption, which is very difficult to achieve (Gans-Morse et al. 2018).

Much of the work on self-selection is now being done across countries which raises a number of important issues about the applicability of self-selection across countries/cultures. The study of the role of self-selection into public service in sustaining honesty in the public sector has never been studied before in Kazakhstan or any other Central Asian economies. From the results of the experiment we find evidence of selection, wherein individuals who apply for government jobs have a higher propensity for corruption. Therefore, raising the issue of self-selection is very important in solving the corruption issue. When given a choice by whom mostly the corruption is perpetuated by in Kazakhstan: citizens, businessmen or politicians; 75 of the respondents (which is more than half of a sample) from the survey think that corruption in Kazakhstan is mostly perpetuated by politicians (Figure 9.11). Kazakhstan - like many developing countries - employs civil service examination prior to applying to civil service job but we still see corruption among civil service employees. In Denmark dishonest individuals will refrain themselves from entering the public sector because of the relatively low level of corruption in public sector. Dishonest individuals are more pecuniary motivated and self-select out of public service into higher-paying private sector jobs (Barfort et al. 2019). Whereas in Kazakhstan dishonest individuals who are pecuniary motivated prefer to enter government service. Therefore, the variation in the levels of observed corruption possibly be driven, in part, by who selects into government service.

Chapter 9

Appendix

9.1 Appendix A

9.1.1 Consent Form

You are about to participate in a research study based on a decision-making experiment.
Before you proceed, please read the consent form below carefully.
If you understand the statements and freely consent to participate in the study please click the “I Agree” button at the bottom of the page.
Note that you may quit the experiment at any point if you decide not to participate. Note also that once you quit without completing the experiment, you will not be eligible for any form of payment that will accumulate throughout the experiment.

Consent form
The information on this consent form is provided so that you can decide whether you wish to participate in this experiment at the Behavioral and Experimental Economics Lab at Nazarbayev University. The study involves web-based behavioral experimental games designed to understand individual decision-making. Participation in the study typically takes about 60 minutes.
The entire experiment is strictly confidential and in no part of the game you will be asked to provide your identity. Your personal information will not be used or stored.
The study will not create any risks for the participants or anyone associated with them.
It is important that you understand that your participation is entirely voluntary.
This means that even if you agree to participate, you are free to withdraw from the experiment at any time.

In this experiment, you will begin by answering a series of survey questions.
And then, you will play multiple rounds of experimental games.
Detailed information and instructions about these games will be provided later.
In each game you will accumulate points based on your performance.
These points will be converted to actual money in KZ Tenge.
At the end of the game you will be eligible for your total earnings plus a flat participation payment of 2000 KZ Tenge. Each point is worth 20 tenge.

To contact about any further questions, concerns, suggestions, or complaints that are not being addressed by the researcher, please contact: Zhanar Ashikbayeva, Graduate School of Public Policy, Nazarbayev University. Email: zhanar.ashikbayeva@nu.edu.kz

Statement of Consent
By clicking “I agree” below you are indicating that you are at least 18 years old, have read and understood this consent form, and agree to participate in this research study.

9.1.2 Dice Task game

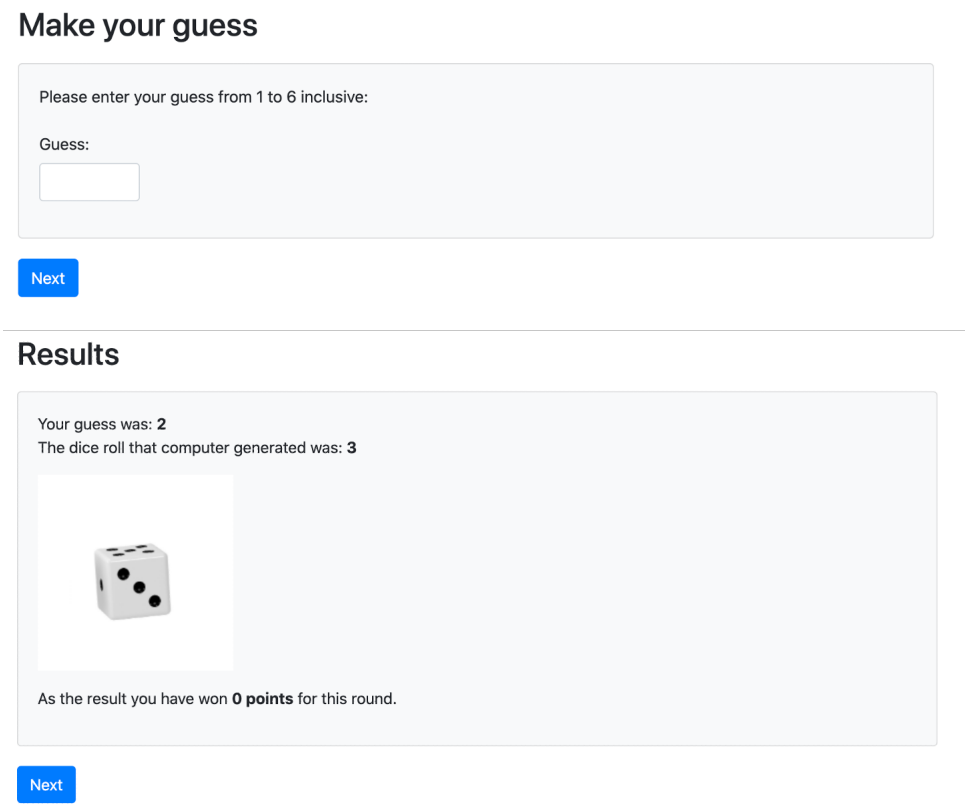
Participants were engaged in 20 rounds of the dice guessing game at two points in the study, for a total of 40 rounds.

Dice task: Control group

In control group respondents were asked to imagine a dice roll, guess a number between 1 and 6, record the number they had imagined and then click to the next screen. For correct guesses, participants earned money, for incorrect guesses, participants received 0 points.

Instructions:

You have to guess a number of dots on a dice from 1 to 6. When you have made your guess you can press the Next button. Hereafter a die will roll and if your guess matched the number of dots on the die then you will win 100 points, else you will win 0 points (Zero). Do not use the back button on your browser during the game as it might delete your total earnings. If you are ready please click Next.

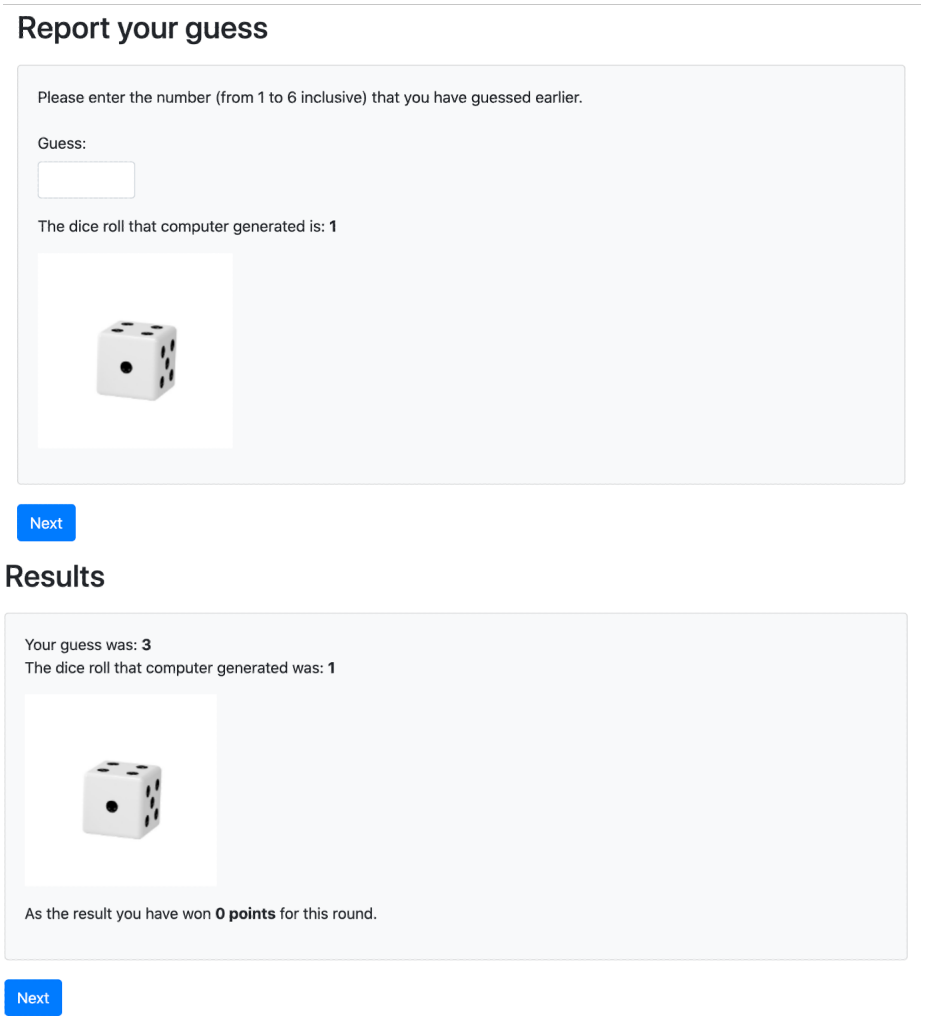


Dice task: Treatment group

In treatment group participants could see the outcome of the dice roll; and therefore, had an opportunity to answer all rounds correctly to earn more money.

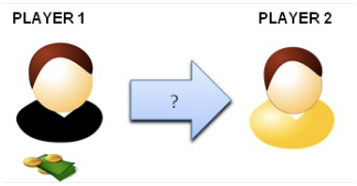
Instructions:

You have to guess a number of dots on a dice from 1 to 6. Please write your guess on a piece of paper to remember it correctly. When you have made your guess you can press the Next button. Hereafter a die will roll and you will be asked to report the number of dots which you have guessed earlier. If your guess matched the number of dots on the die then you will win 100 points, else you will win 0 points (Zero). Do not use the back button on your browser during the game as it might delete your total earnings. If you are ready please click Next.



9.1.3 Dictator Game

Participants played five (5) rounds of the game. In total they could earn up to 500 points.



Game 2: Dictator game

Now you will play the second game in our experiment.
In this game you will be matched with another player participating in this experiment randomly.
You will not know the identity of that player and the other will not have information about you either.

Game Rules:

- In this game Each of you will be randomly assigned to one of the two roles: 1) Dictator or 2) Receiver.
- If you are assigned as the Dictator you will decide how to divide 100 points between you and the Receiver.
- The amount you choose to keep for yourself will be your earnings and the rest will be send to the Receiver.

If you have been assigned to Receiver's role you will have to wait for Dictator's decision. You payoff would depend on Dictator's decision.

If you have read and understood the rules of the game, proceed by clicking Next button.

Next

9.1.4 Donation Game

Participants played only one (1) round of the game and could earn up to 500 points.

Game 4: Donation Game

For this game, you will be given 100 points with which to play.

You may keep all of this money or you may make a donation to one of the following five organizations in Kazakhstan:

- ○ DARA Charity Foundation
- ○ Saby Charitable Foundation
- ○ Public Fund "ANA UYI"
- ○ Charitable Foundation "Niyet"
- ○ Aruzhan Sain Public Foundation "Voluntary Society Mercy"
- ○ None

You can donate any points between zero and 100 points. We emphasize that whatever points you donate the actual tenge amount will be given to your chosen organization.

Any money you do not donate will become part of your earnings for this game. For example, if you donate 50 points, your will receive 100 points – 50 points = 50 points in earnings for this game.

How many points would you like to donate? :

Next

9.2 Appendix B

9.2.1 Survey Questions

Please answer the following questions. Your answer to the questions in this survey will not affect your earnings.

Survey 1 – Public Service Motivation Questions

Please state the extent to which you agree or disagree with the following statements:

1. I am interested in helping to improve public service
   O Strongly agree O Agree O Undecided (or if you do not understand the statement) O Disagree O Strongly disagree

2. Meaningful public service is not important to me
   O Strongly agree O Agree O Undecided (or if you do not understand the statement) O Disagree O Strongly disagree

3. I think equal opportunities for citizens are very important
   O Strongly agree O Agree O Undecided (or if you do not understand the statement) O Disagree O Strongly disagree

4. It is difficult for me to contain my feelings when I see people in distress
   O Strongly agree O Agree O Undecided (or if you do not understand the statement) O Disagree O Strongly disagree

5. Making a difference to society means more to me than personal achievements
   O Strongly agree O Agree O Undecided (or if you do not understand the statement) O Disagree O Strongly disagree

6. It is important to contribute to activities that tackle social problems
   O Strongly agree O Agree O Undecided (or if you do not understand the statement) O Disagree O Strongly disagree

7. I am satisfied when I see people benefiting from the public programs I was involved in

   O Strongly agree O Agree O Undecided (or if you do not understand the statement) O Disagree O Strongly disagree

8. It is not important for me to contribute to the common good

   O Strongly agree O Agree O Undecided (or if you do not understand the statement) O Disagree O Strongly disagree

9. It is important that citizens can rely on the continuous provision of public services

   O Strongly agree O Agree O Undecided (or if you do not understand the statement) O Disagree O Strongly disagree

10. I do not feel sympathetic to the plight of the underprivileged

    O Strongly agree O Agree O Undecided (or if you do not understand the statement) O Disagree O Strongly disagree

11. I am prepared to make sacrifices for the good of society

    O Strongly agree O Agree O Undecided (or if you do not understand the statement) O Disagree O Strongly disagree

12. I personally identify with the aim of protecting individual liberties and rights

    O Strongly agree O Agree O Undecided (or if you do not understand the statement) O Disagree O Strongly disagree

13. I like to discuss topics regarding public programs and policies with others

    O Strongly agree O Agree O Undecided (or if you do not understand the statement) O Disagree O Strongly disagree

14. I would prefer seeing public officials do what is best for the whole community, even if it harmed my interests

O Strongly agree O Agree O Undecided (or if you do not understand the statement) O Disagree O Strongly disagree

15. It is not fundamental that public services respond to the needs of citizens
O Strongly agree O Agree O Undecided (or if you do not understand the statement) O Disagree O Strongly disagree

16. I empathize with other people who face difficulties
O Strongly agree O Agree O Undecided (or if you do not understand the statement) O Disagree O Strongly disagree

17. I do not believe in putting civic duty before self
O Strongly agree O Agree O Undecided (or if you do not understand the statement) O Disagree O Strongly disagree

18. I would agree to a good plan to make a better life for the poor, even if it costs me money
O Strongly agree O Agree O Undecided (or if you do not understand the statement) O Disagree O Strongly disagree

19. I believe that public sector activities contribute to our general welfare
O Strongly agree O Agree O Undecided (or if you do not understand the statement) O Disagree O Strongly disagree

20. Serving the public interest is more important than helping a single individual
O Strongly agree O Agree O Undecided (or if you do not understand the statement) O Disagree O Strongly disagree

21. Decisions regarding public services should be democratic despite the time and effort it takes
O Strongly agree O Agree O Undecided (or if you do not understand the statement) O Disagree O Strongly disagree

22. I have little compassion for people in need who are unwilling to take the first step to help themselves

O Strongly agree O Agree O Undecided (or if you do not understand the statement) O Disagree O Strongly disagree

23. I am not willing to risk personal loss to help society
    O Strongly agree O Agree O Undecided (or if you do not understand the statement) O Disagree O Strongly disagree

24. I admire people who initiate or are involved in activities to aid my community
    O Strongly agree O Agree O Undecided (or if you do not understand the statement) O Disagree O Strongly disagree

25. Everybody is entitled to a good service, even if it costs a lot of money
    O Strongly agree O Agree O Undecided (or if you do not understand the statement) O Disagree O Strongly disagree

26. It is not fundamental that the interests of future generations are taken into account when developing public policies
    O Strongly agree O Agree O Undecided (or if you do not understand the statement) O Disagree O Strongly disagree

27. I get very upset when I see other people being treated unfairly
    O Strongly agree O Agree O Undecided (or if you do not understand the statement) O Disagree O Strongly disagree

28. People should not give back to society more than they get from it
    O Strongly agree O Agree O Undecided (or if you do not understand the statement) O Disagree O Strongly disagree

29. Contributing to public programs and policies helps me realize myself
    O Strongly agree O Agree O Undecided (or if you do not understand the statement) O Disagree O Strongly disagree

30. To act ethically is not essential for public servants

O Strongly agree O Agree O Undecided (or if you do not understand the statement) O Disagree O Strongly disagree

31. I believe that public employees must always be aware of the legitimacy of their activities
    O Strongly agree O Agree O Undecided (or if you do not understand the statement) O Disagree O Strongly disagree

32. Considering the welfare of other is not important
    O Strongly agree O Agree O Undecided (or if you do not understand the statement) O Disagree O Strongly disagree

33. Serving other citizens would give me a good feeling even if no one paid me for it
    O Strongly agree O Agree O Undecided (or if you do not understand the statement) O Disagree O Strongly disagree

Survey 2 – Business Conduct Questions

Please answer the following questions:

1. Do you believe that networking is crucial for success in the public sector?
   O Strongly agree O Agree O Undecided (or if you do not understand the statement) O Disagree O Strongly disagree

2. Do you believe that networking is crucial for success in the private sector?
   O Strongly agree O Agree O Undecided (or if you do not understand the statement) O Disagree O Strongly disagree

3. Do bribes are necessary to operate a business in Kazakhstan?
   O Strongly agree O Agree O Undecided (or if you do not understand the statement) O Disagree O Strongly disagree

4. Do you consider yourself?
   O Risk averse O Risk neutral O Risk taker

5. Do you consider yourself a good predictor about random future events?
   O Strongly agree O Agree O Undecided (or if you do not understand the statement) O Disagree O Strongly disagree

6. Cheating on college tests is morally wrong
   O Strongly agree O Agree O Undecided (or if you do not understand the statement) O Disagree O Strongly disagree

7. When a student who denies cheating is found guilty, the student should receive additional punishment for lying
   O Strongly agree O Agree O Undecided (or if you do not understand the statement) O Disagree O Strongly disagree

8. If a student accused of cheating admits having cheated, the punishment should be reduced to reward honesty
   O Strongly agree O Agree O Undecided (or if you do not understand the statement) O Disagree O Strongly disagree

9. A student who sees another student cheating and reports it should refuse to identify the cheater
   O Strongly agree O Agree O Undecided (or if you do not understand the statement) O Disagree O Strongly disagree

10. Students should report by name anyone seen cheating
    O Strongly agree O Agree O Undecided (or if you do not understand the statement) O Disagree O Strongly disagree

11. Most students who cheat are unethical people
    O Strongly agree O Agree O Undecided (or if you do not understand the statement) O Disagree O Strongly disagree

12. There is really nothing wrong with cheating, other than the risk of being caught

O Strongly agree O Agree O Undecided (or if you do not understand the statement) O Disagree O Strongly disagree

13. Most students who are accused of cheating are actually innocent
    O Strongly agree O Agree O Undecided (or if you do not understand the statement) O Disagree O Strongly disagree

14. Most college students never cheat
    O Strongly agree O Agree O Undecided (or if you do not understand the statement) O Disagree O Strongly disagree

15. It is lying when a student who cheated denies it
    O Strongly agree O Agree O Undecided (or if you do not understand the statement) O Disagree O Strongly disagree

16. Corruption in Kazakhstan today is
    O A very serious problem O A serious problem O A somewhat serious problem O Not a serious problem O Not a problem at all

17. Compared to 10 years ago, corruption in Kazakhstan today is
    O Much worse O Worse O The same O Reduced O Reduced much O Do not know

18. Corruption is a natural occurrence and part of our daily life, so denouncing it is unnecessary
    O Strongly agree O Agree O Undecided (or if you do not understand the statement) O Disagree O Strongly disagree

19. In the government of Kazakhstan, there is no sincere desire and will to combat corruption
    O Strongly agree O Agree O Undecided (or if you do not understand the statement) O Disagree O Strongly disagree

20. Current government anti-corruption strategies for combating corruption are effective

O Strongly agree O Agree O Undecided (or if you do not understand the statement) O Disagree O Strongly disagree

21. Corruption is perpetuated mostly by
O Citizens O Businessmen O Politicians O Bureaucrats

22. How do you compare Kazakhstan with other Central Asian countries regarding corruption?
O More corrupt O Equal O Less corrupt

23. A public officer being recruited on the basis of family ties and friendship networks?
O Always acceptable O Usually acceptable O Sometimes acceptable O Not acceptable

24. A public officer asking for a bribe to speed up administrative procedures
O Always acceptable O Usually acceptable O Sometimes acceptable O Not acceptable

25. A private citizen offering a bribe to a public official to speed up administrative procedures
O Always acceptable O Usually acceptable O Sometimes acceptable O Not acceptable

26. An elected official taking public funds for private use
O Always acceptable O Usually acceptable O Sometimes acceptable O Not acceptable

27. An elected official using stolen public funds to assist his or her community
O Always acceptable O Usually acceptable O Sometimes acceptable O Not acceptable

28. A law enforcement officer (police, customs, immigration, army) asking for a bribe

O Always acceptable O Usually acceptable O Sometimes acceptable O Not acceptable

29. A private company owner asking for a bribe from a job applicant
    O Always acceptable O Usually acceptable O Sometimes acceptable O Not acceptable

30. A public company official asking for a bribe from a job applicant
    O Always acceptable O Usually acceptable O Sometimes acceptable O Not acceptable

31. Reporting daily activities as part of a bureaucratic process that requires submitting a report to managers or supervisors is
    O Not at all important O Slightly Important O Important O Fairly Important O Extremely Important

32. Too much paperwork leads to more corruption.
    O Strongly agree O Agree O Undecided (or if you do not understand the statement) O Disagree O Strongly disagree

33. Corruption is more likely when salaries are below a basic living wage.
    O Strongly agree O Agree O Undecided (or if you do not understand the statement) O Disagree O Strongly disagree

34. Higher penalties create a deterrent effect against illicit behavior.
    O Strongly agree O Agree O Undecided (or if you do not understand the statement) O Disagree O Strongly disagree

Survey 3 – Demographics Questions

Please answer the following questions:

1. What is your age? (min=18, max=64)

2. What is your gender?
    O Female O Male

3. What is your marital status?

   O Single, never married O Married or domestic partnership O Widowed O Divorced O Separated

4. How many children do you have? (min=0, max=10)

5. What is your hometown?

6. Are you currently?

   O Full-time student O Part-time student O Not a student

7. What is your current program level?

   O Bachelor's degree O Master's degree O Doctorate degree O Non-degree

8. What is your field of study?

9. What is your current GPA?

   O 4.00-3.50 O 3.50-3.00 O 3.00-2.50 O 2.50-2.00 O 2.00-1.50 O 1.50-1.00 O less than 1.00

10. What's the highest degree of your mother's education?

    O Bachelor's degree O Master's degree O Doctorate degree O Non-degree O Does not apply

11. What's the highest degree of your father's education?

    O Bachelor's degree O Master's degree O Doctorate degree O Non-degree O Does not apply

12. Are you currently?

    O Employed in private sector (local company) O Employed in private sector (foreign company) O Employed in public sector O Employed in quasi-governmental sector O Self-employed O Unemployed

13. Number of years worked in public service (min=0, max=30)

14. What is your monthly income? (in tenge, excluding stipend)

    O 0-50,000 O 50 000-100 000 O 100 000-150 000 O 150 000-200 000 O 200 000-250 000 O 250 000-300 000 O 300 000-350 000 O 350 000-400 000 O more than 400 000

15. Which sector is your mother employed?

    O Employed in private sector (local company) O Employed in private sector (foreign company) O Employed in public sector O Employed in quasi-governmental sector O Self-employed O Unemployed O Does not apply

16. Which sector is your father employed?

    O Employed in private sector (local company) O Employed in private sector (foreign company) O Employed in public sector O Employed in quasi-governmental sector O Self-employed O Unemployed O Does not apply

Survey 4 – Job attribute and Career Preferences and Career Expectations Questions

How important are the following aspects of a job to you?:

1. Job security

   O Not at all important O Slightly Important O Important O Fairly Important O Extremely important

2. High income

   O Not at all important O Slightly Important O Important O Fairly Important O Extremely important

3. Good benefits package

   O Not at all important O Slightly Important O Important O Fairly Important O Extremely important

4. Opportunities for advancement

   O Not at all important O Slightly Important O Important O Fairly Important

O Extremely important

5. A job you find interesting
   O Not at all important O Slightly Important O Important O Fairly Important O Extremely important

6. A job that allows you to help other people
   O Not at all important O Slightly Important O Important O Fairly Important O Extremely important

7. A job that is useful for society
   O Not at all important O Slightly Important O Important O Fairly Important O Extremely important

8. Reasonable work hours
   O Not at all important O Slightly Important O Important O Fairly Important O Extremely important

9. Opportunities to meet influential people
   O Not at all important O Slightly Important O Important O Fairly Important O Extremely important

10. A job that others consider prestigious
    O Not at all important O Slightly Important O Important O Fairly Important O Extremely important

Imagine you are free to choose any job. How likely would you be to choose each of the following (starting from the *third* question)?

1. Which of the following statements best describes your career preferences?
   O I would prefer to work in the public sector O I would prefer to work in the private sector O I would prefer to work in the international organization O I would prefer to work in the quasi-governmental sector O I would prefer to have my own business O Do not plan to work

2. What is the primary reason and motivation in your previous section?

   O Better salary O Job security and staff retention O Better service to community O Political connections O Other

3. A job in the central government

   O Very likely O Likely O Neutral O Not Likely O Very Unlikely

4. A job in the state or local government

   O Very likely O Likely O Neutral O Not Likely O Very Unlikely

5. A job in a private-sector corporation

   O Very likely O Likely O Neutral O Not Likely O Very Unlikely

6. A job in a small or medium-sized private sector business

   O Very likely O Likely O Neutral O Not Likely O Very Unlikely

7. A job as an owner of a private business

   O Very likely O Likely O Neutral O Not Likely O Very Unlikely

8. A job in the banking of finance sectors

   O Very likely O Likely O Neutral O Not Likely O Very Unlikely

9. A job in a consulting

   O Very likely O Likely O Neutral O Not Likely O Very Unlikely

10. A job in an organization in the non-profit sector

    O Very likely O Likely O Neutral O Not Likely O Very Unlikely

11. A job in the government budget sector (e.g., public health, science, education, culture)

    O Very likely O Likely O Neutral O Not Likely O Very Unlikely

9.3 Appendix C

9.3.1 Job Attribute index results

I presented participants with a series of questions asking them to evaluate the importance of 10 job attributes (Gans-Morse et al. 2020), including intrinsic attributes, such as valuing a job that improves society, helps others, or involves interesting work; extrinsic attributes, such as a high income, promotion opportunities, networking opportunities, or prestige; and pragmatic attributes, such as job security, good benefits, or a convenient schedule. I asked respondents to rate the importance of job attributes on a scale of 1 to 5, where 1 represents "Not at all important" and 5 represents "Extremely important".

Intrinsic: How important are the following aspects of a job to you?

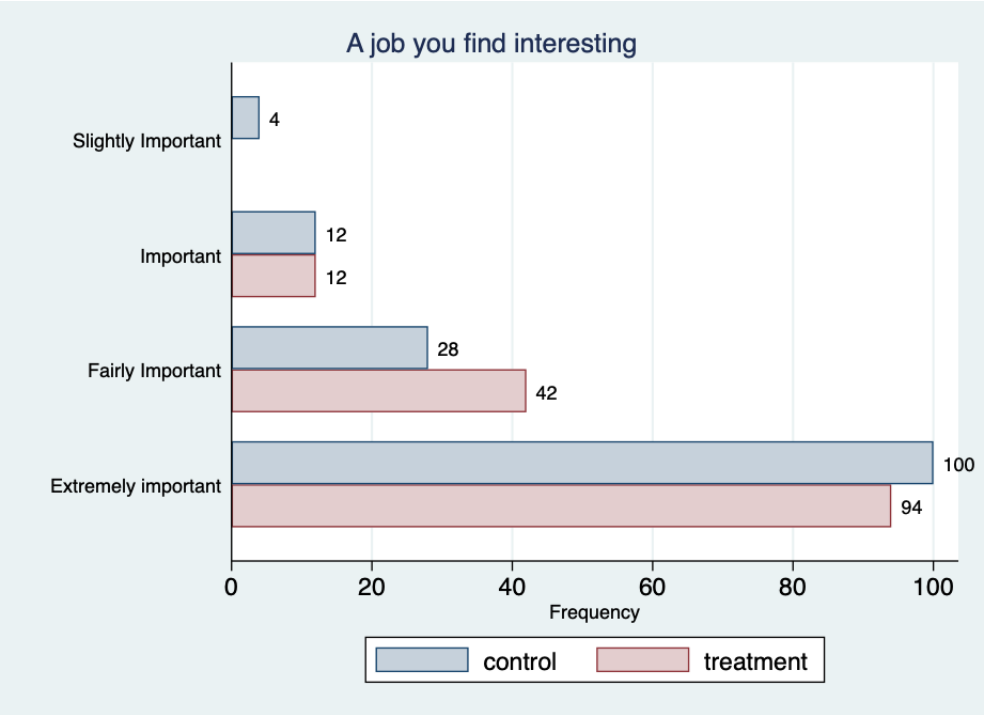


Figure 9.1: A job you find interesting

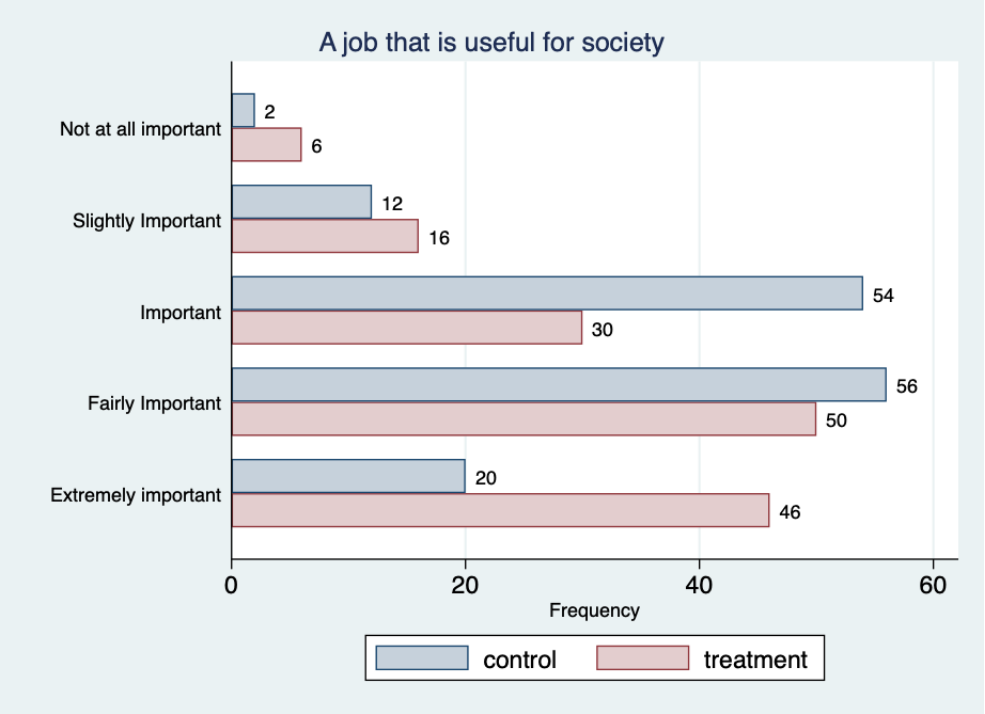


Figure 9.2: A job that is useful for society

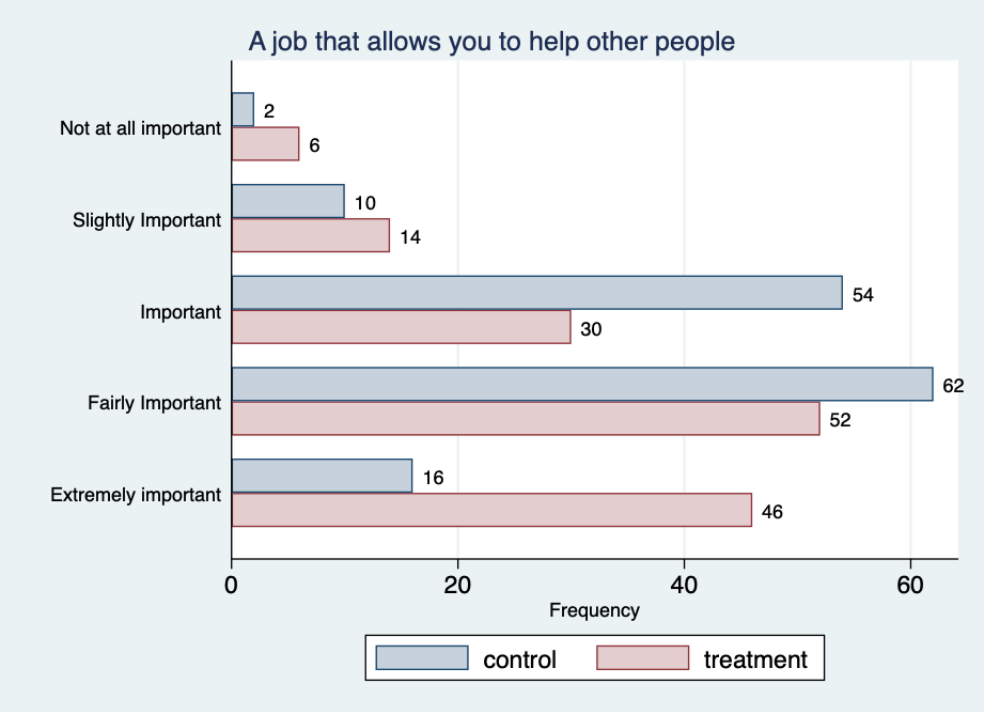


Figure 9.3: A job that allows you to help other people

Extrinsic: How important are the following aspects of a job to you?

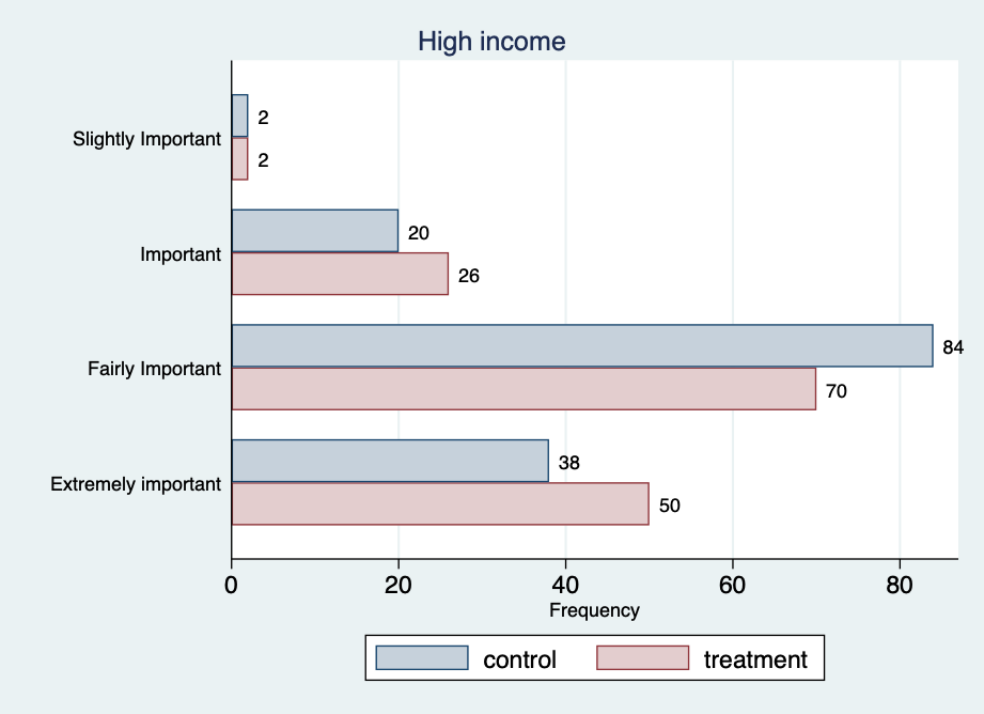


Figure 9.4: High income

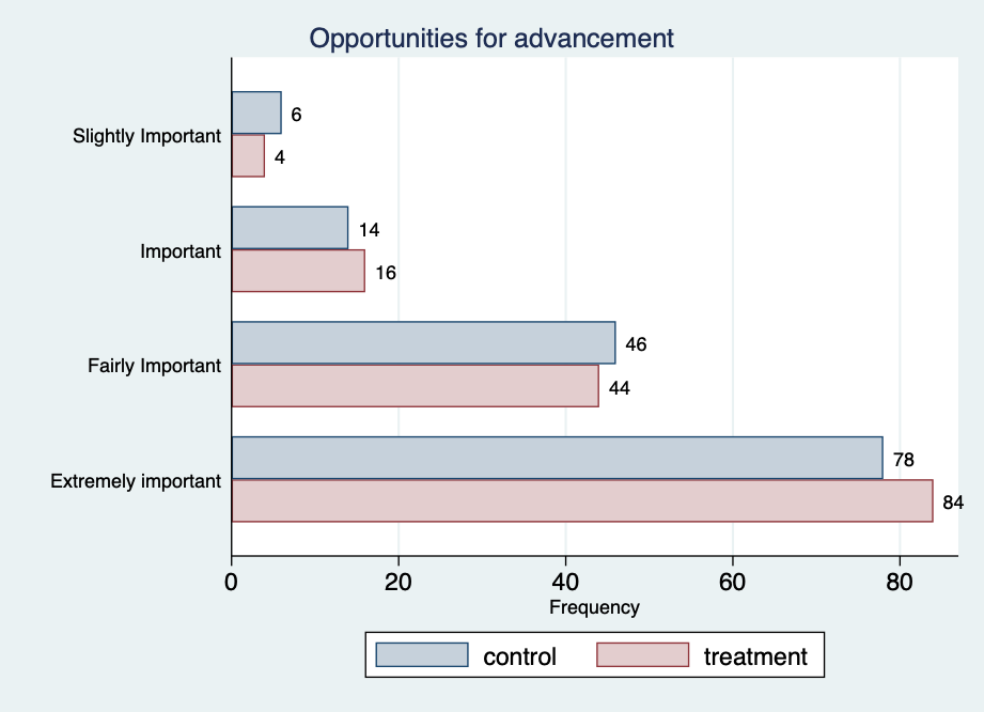


Figure 9.5: Opportunities for advancement

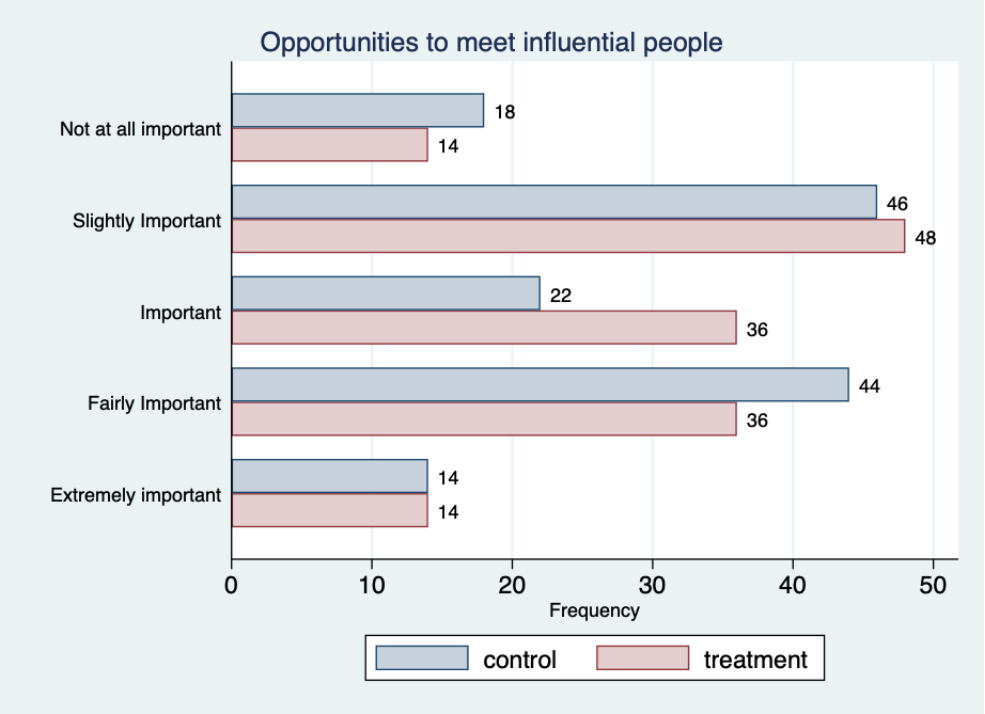


Figure 9.6: Opportunities to meet influential people

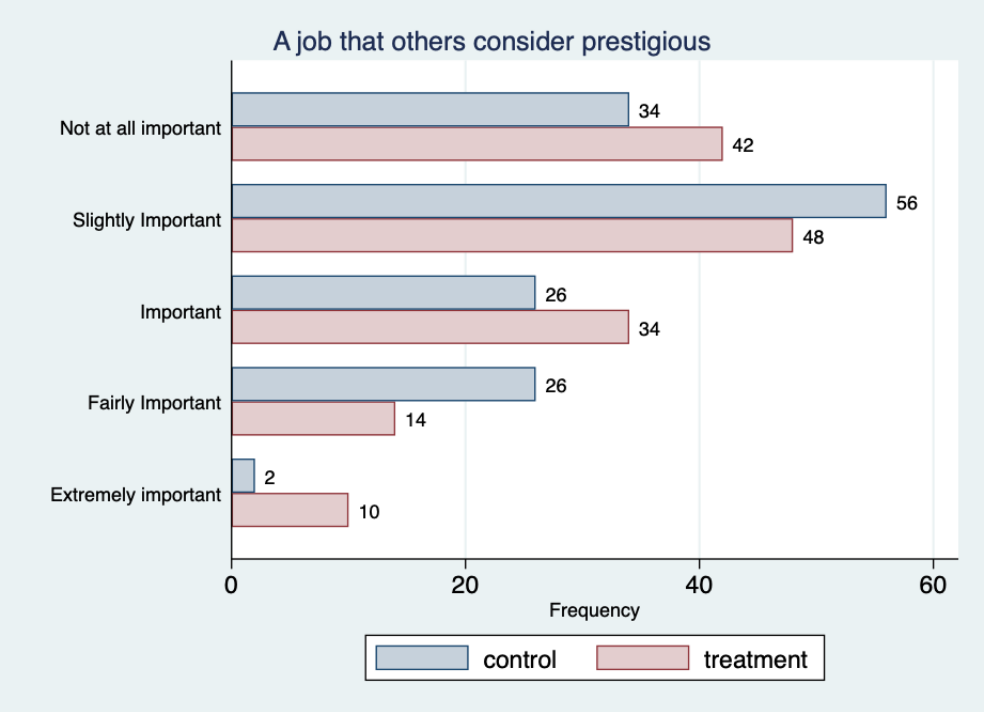


Figure 9.7: A job that other consider prestigious

Pragmatic: How important are the following aspects of a job to you?

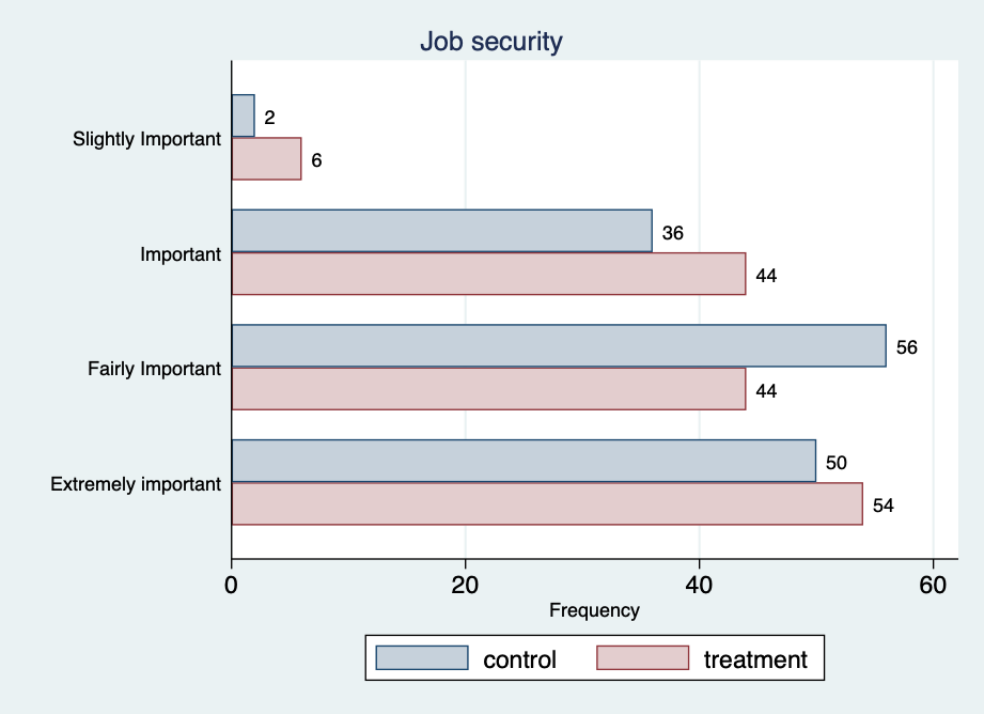


Figure 9.8: Job security

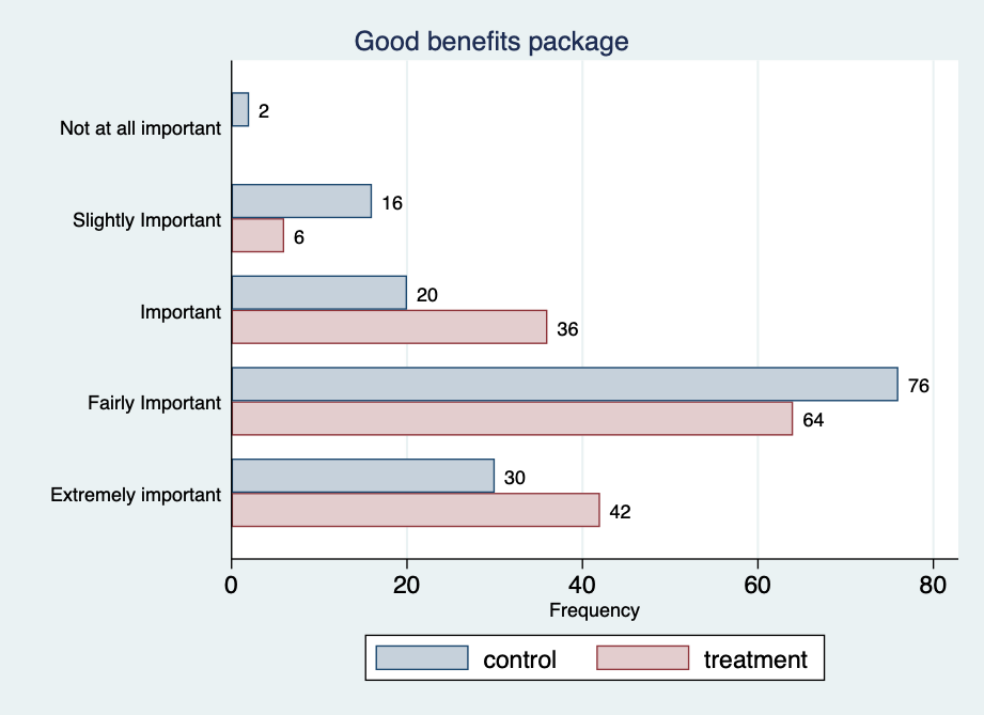
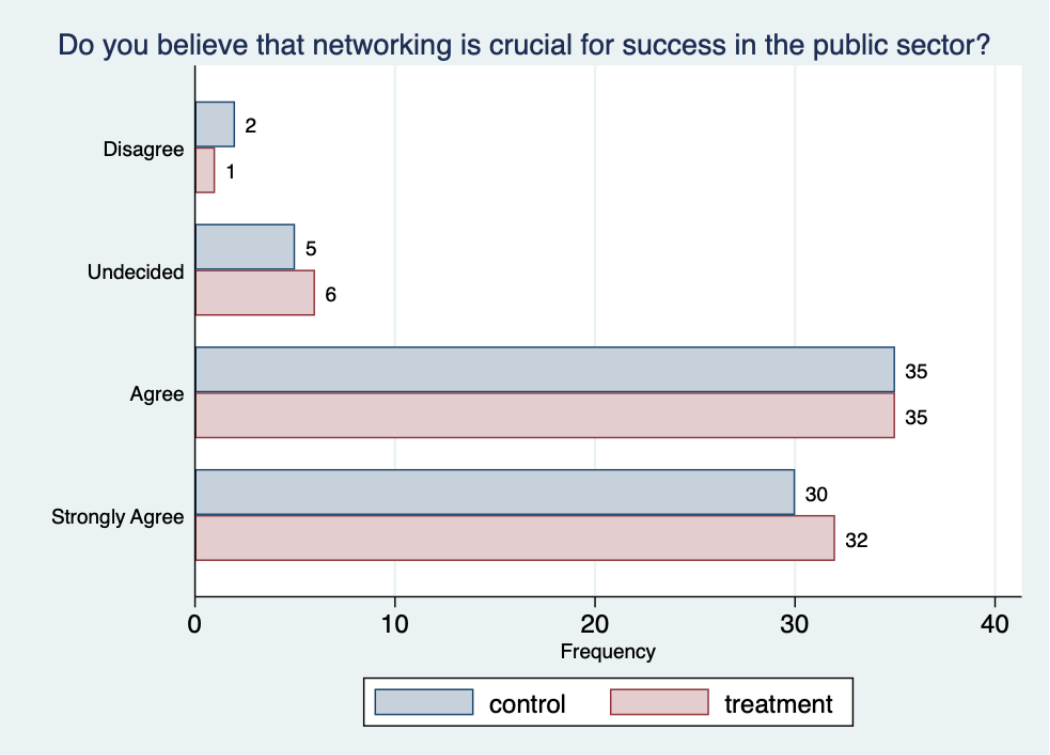
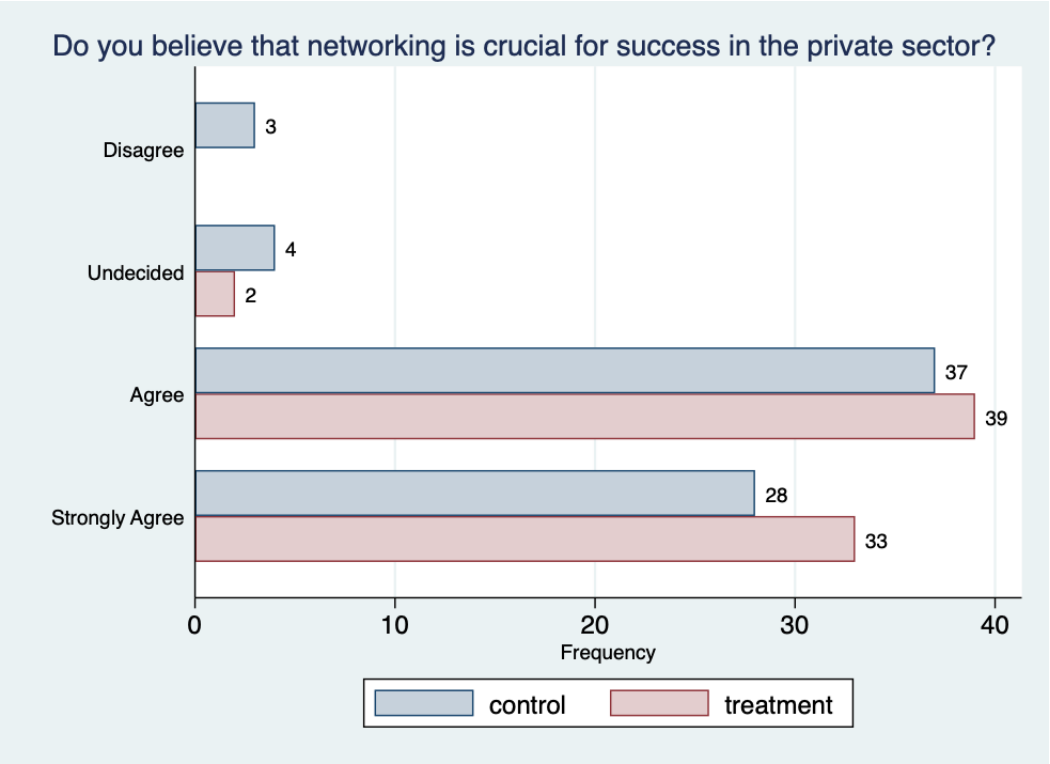


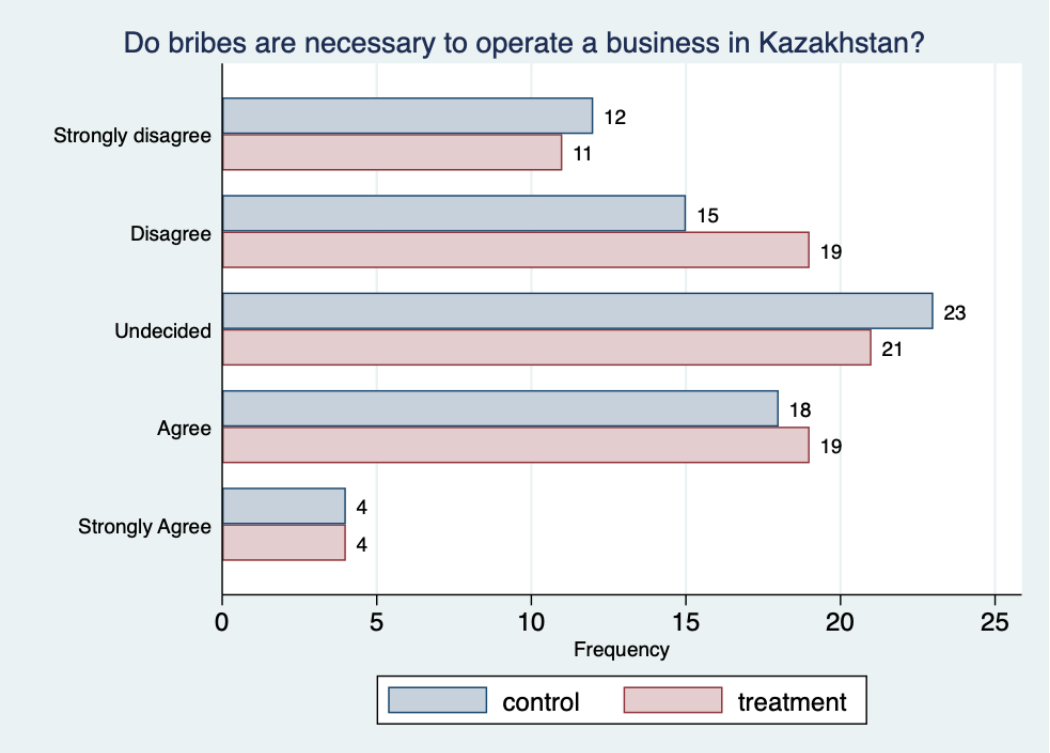
Figure 9.9: Good benefits package

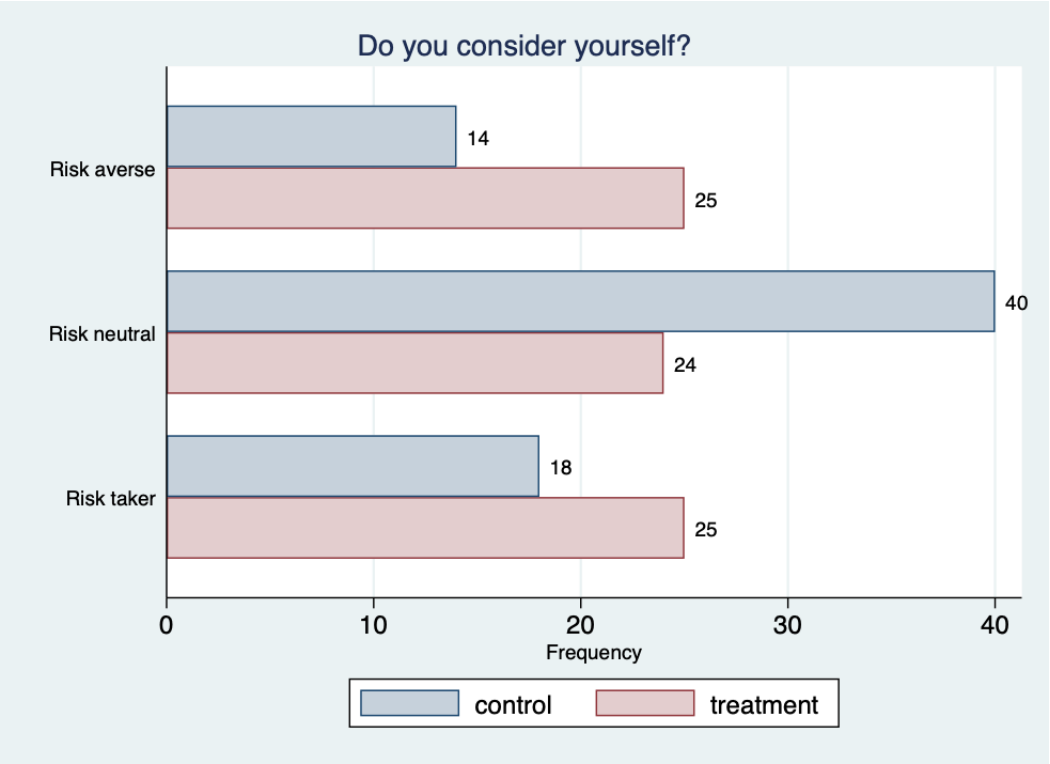
Figure 9.10: Reasonable work hours

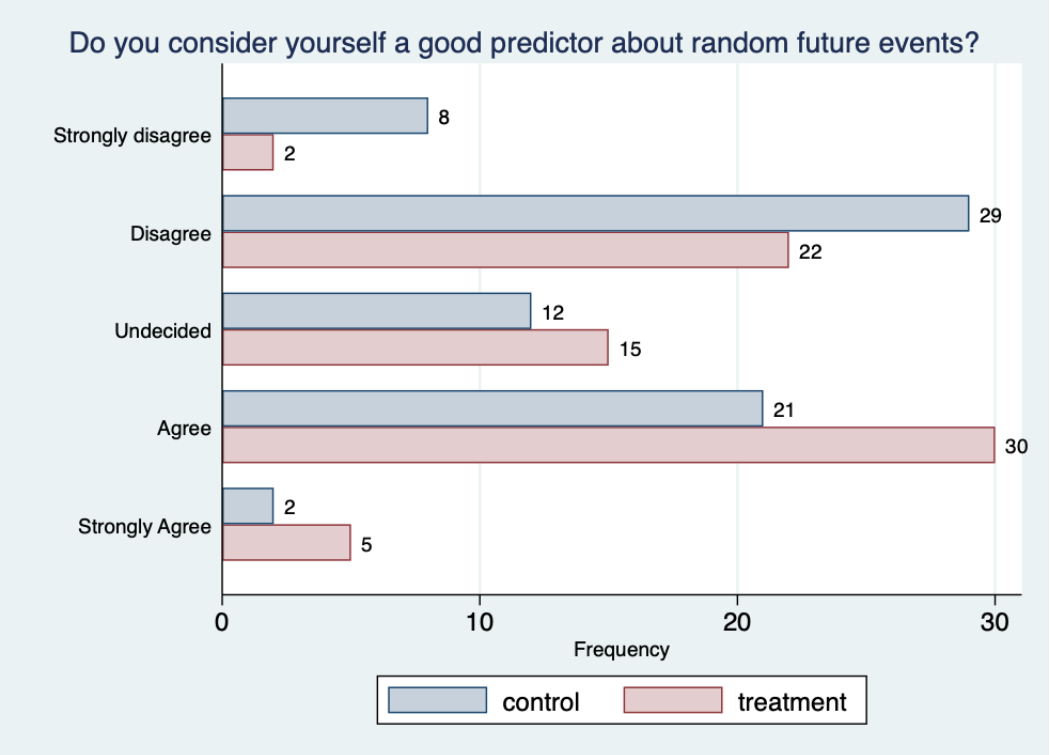
9.3.2 Business Conduct questions results

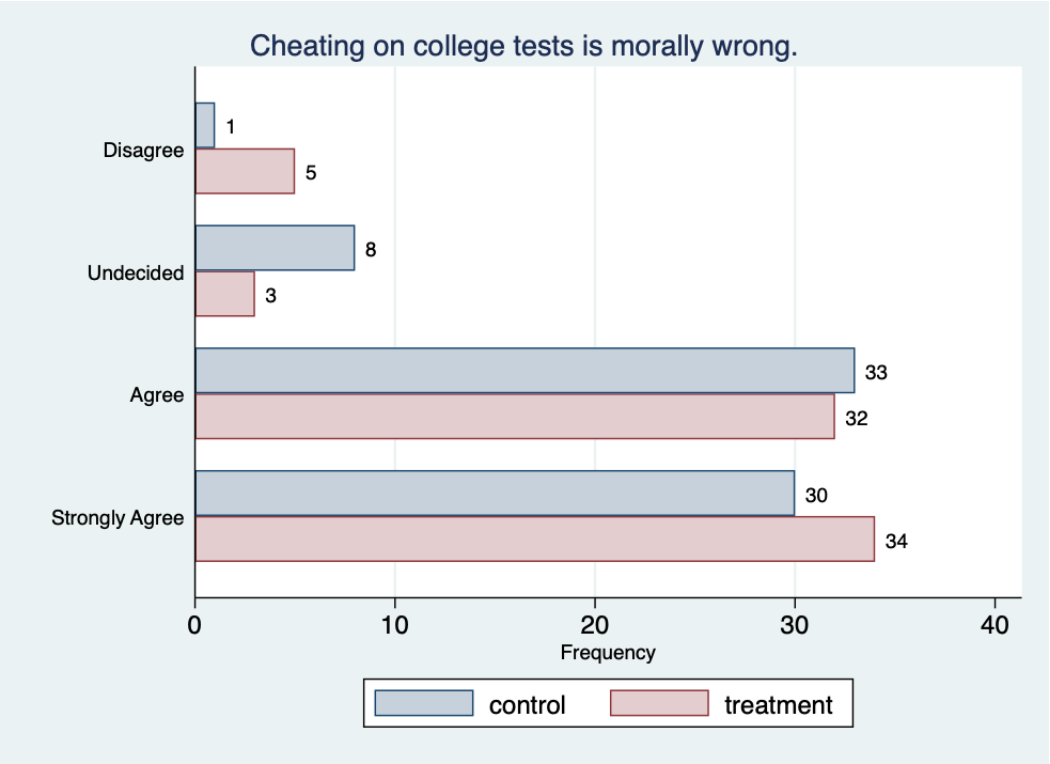


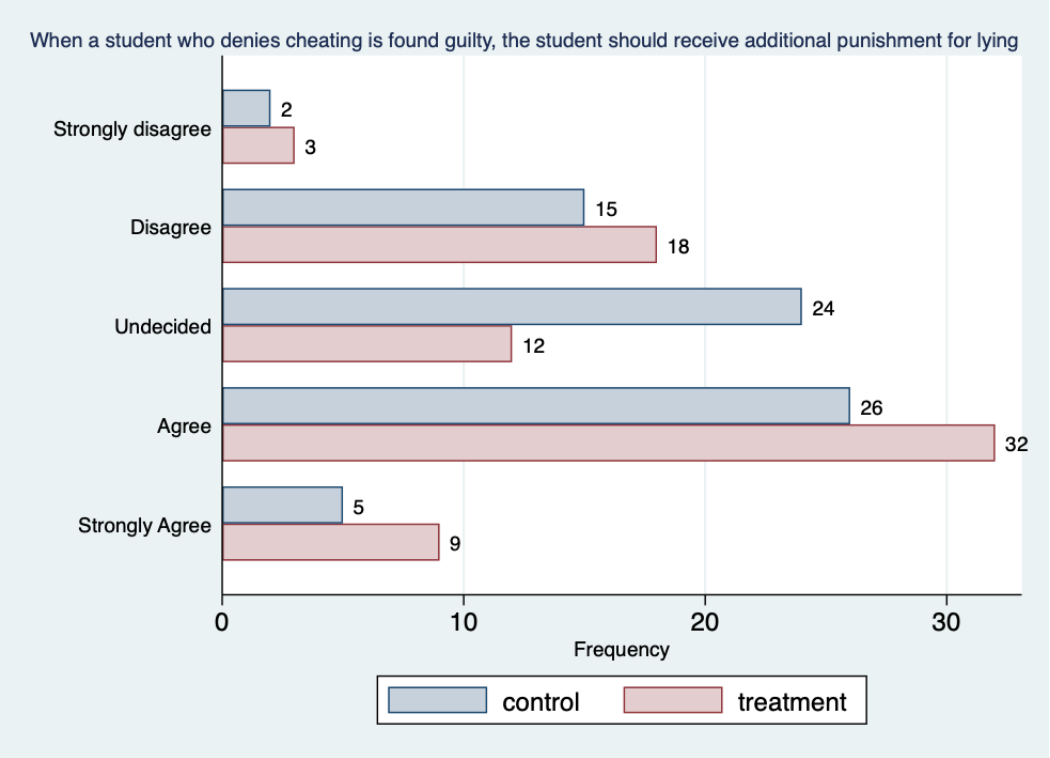

Do you believe that networking is crucial for success in the private sector?
Disagree
Undecided
Agree
Strongly Agree
3
4
2
37
39
28
33
0
10
20
30
40
Frequency
control
treatment

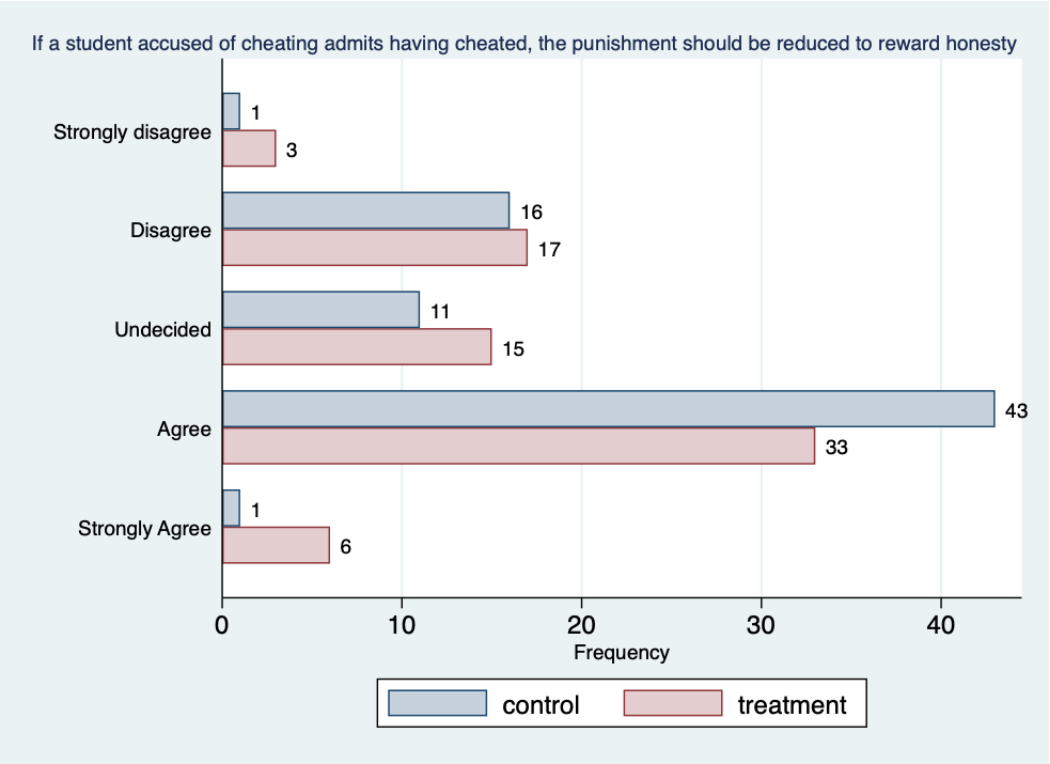

Do bribes are necessary to operate a business in Kazakhstan?
Strongly disagree
Disagree
Undecided
Agree
Strongly Agree
12
11
15
19
23
21
18
19
4
4
0
5
10
15
20
25
Frequency
control
treatment

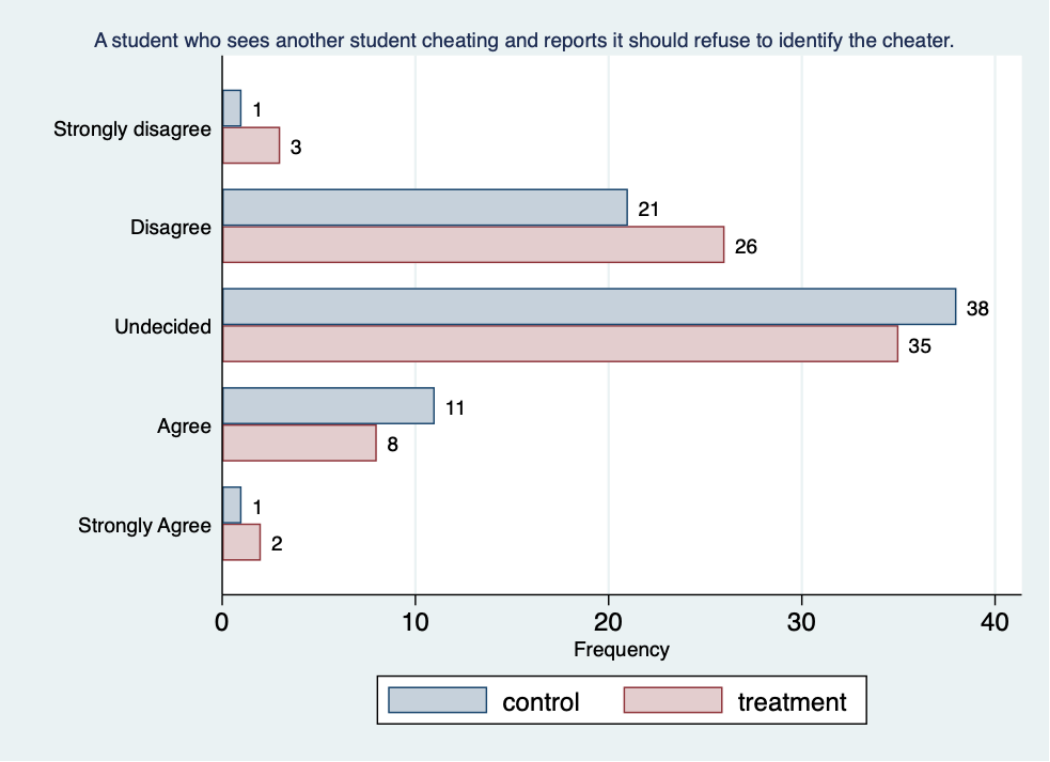

Do you consider yourself?
Risk averse
Risk neutral
Risk taker
14
25
40
24
18
25
0
10
20
30
40
Frequency
control
treatment

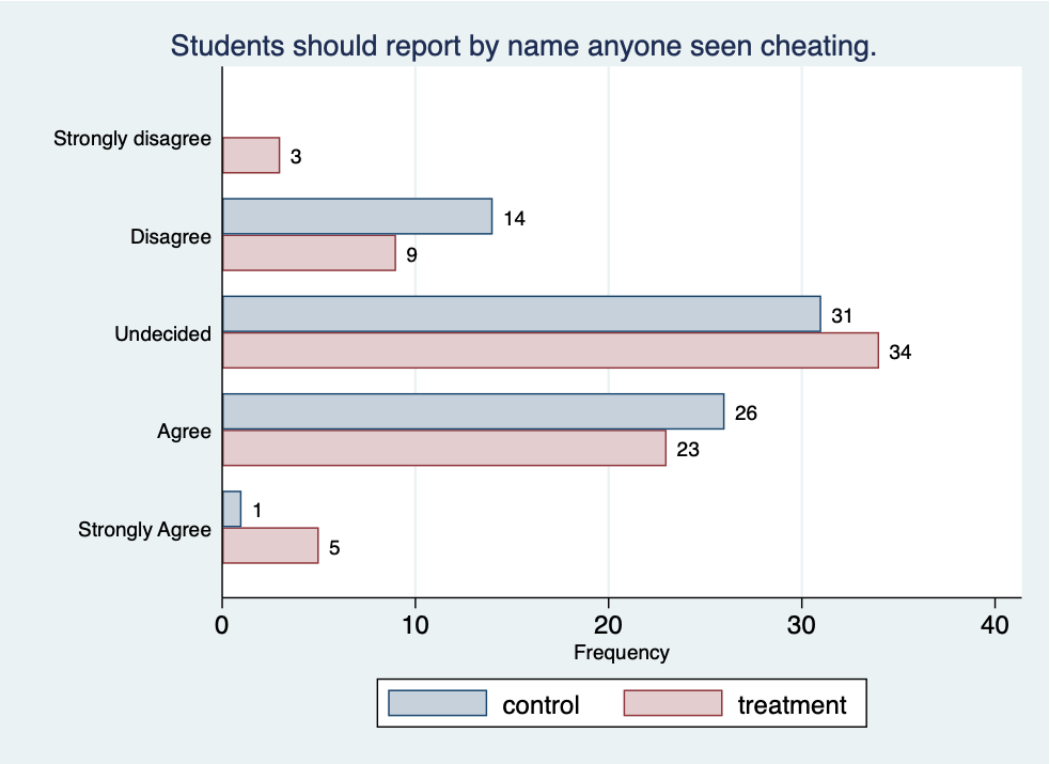

Do you consider yourself a good predictor about random future events?
Strongly disagree
Disagree
Undecided
Agree
Strongly Agree
8
2
29
22
12
15
21
30
2
5
0
10
20
30
Frequency
control
treatment

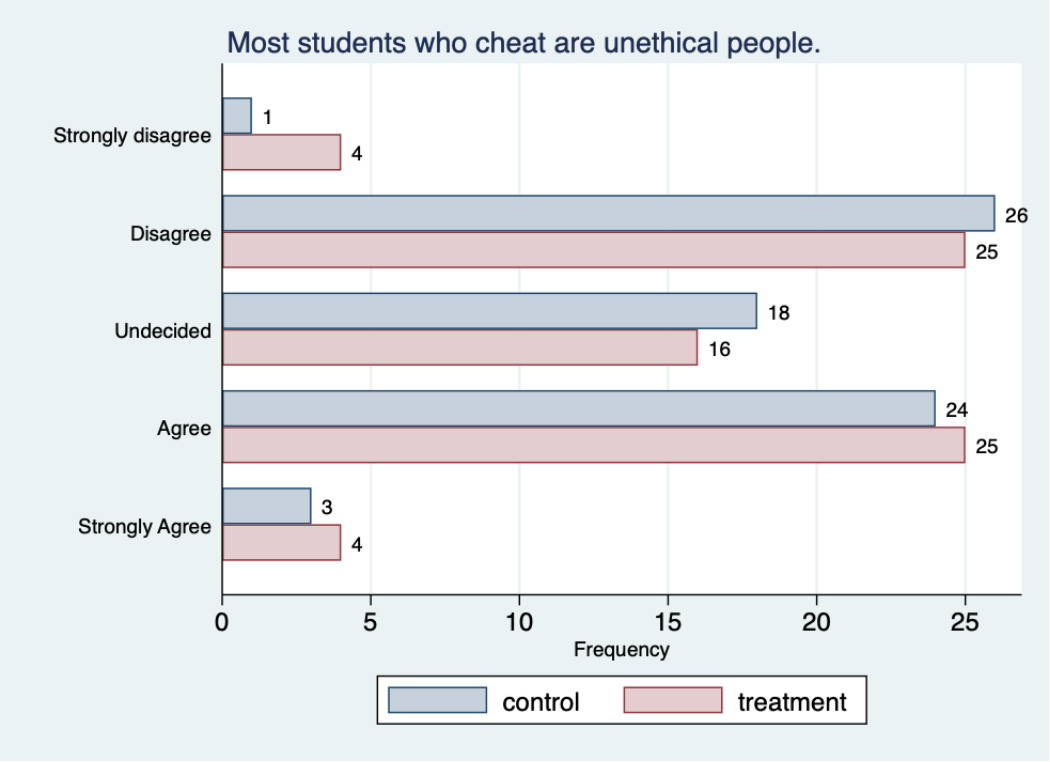

Cheating on college tests is morally wrong.
Disagree
Undecided
Agree
Strongly Agree
1
5
8
3
33
32
30
34
0
10
20
30
40
Frequency
control
treatment

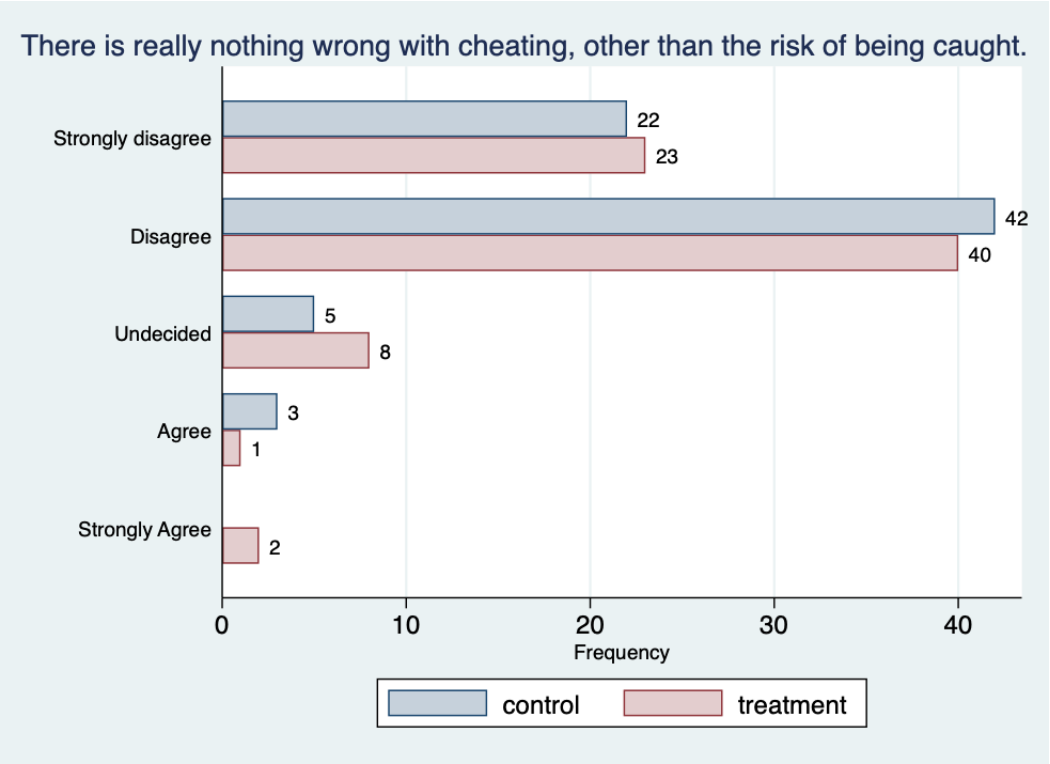

When a student who denies cheating is found guilty, the student should receive additional punishment for lying
Strongly disagree
Disagree
Undecided
Agree
Strongly Agree
2
3
15
18
24
12
26
32
5
9
0
10
20
30
Frequency
control
treatment

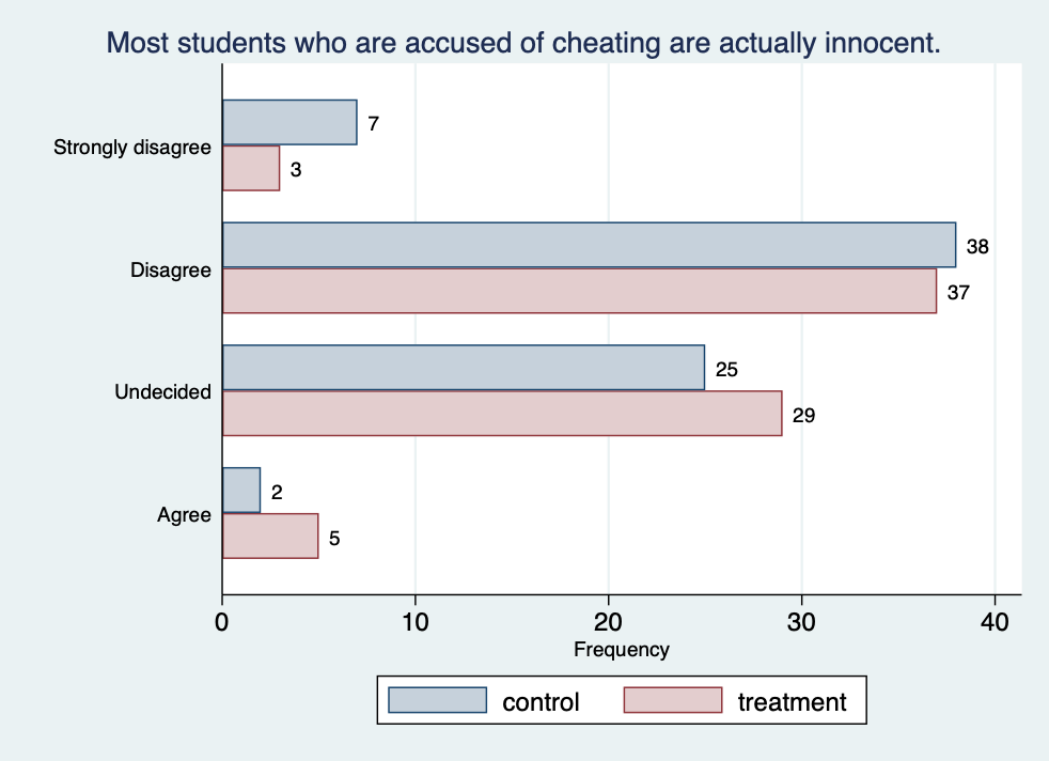

If a student accused of cheating admits having cheated, the punishment should be reduced to reward honesty
Strongly disagree
Disagree
Undecided
Agree
Strongly Agree
1
3
16
17
11
15
43
33
1
6
0
10
20
30
40
Frequency
control
treatment

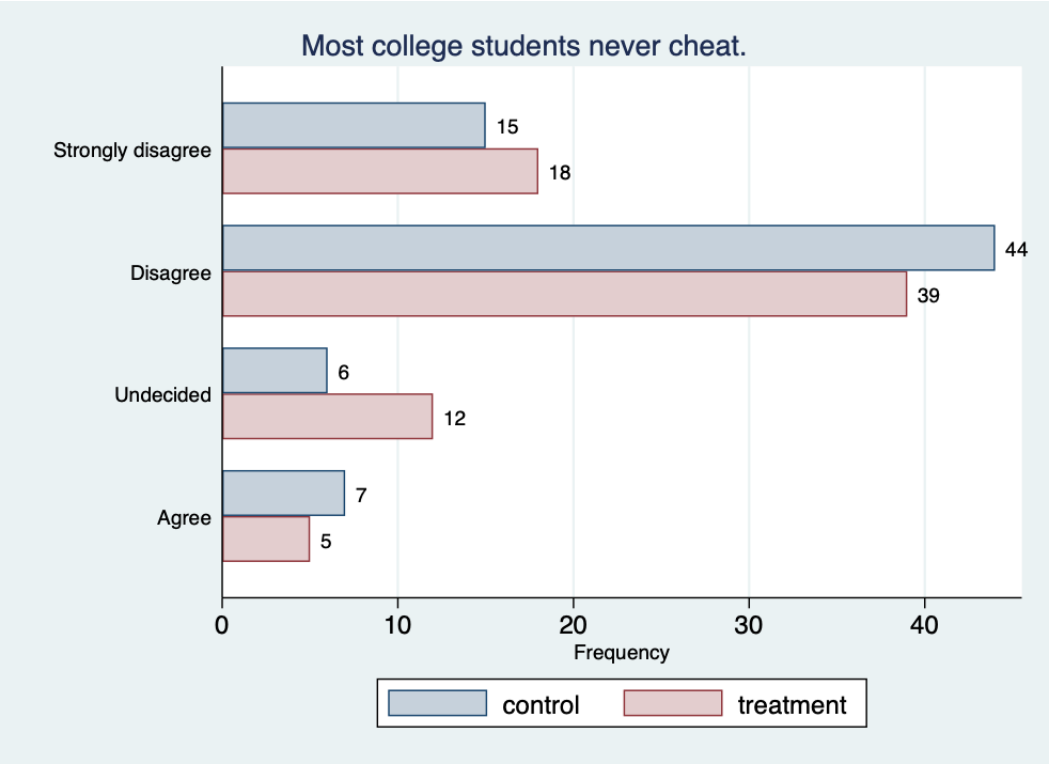

A student who sees another student cheating and reports it should refuse to identify the cheater.
Strongly disagree
Disagree
Undecided
Agree
Strongly Agree
1
3
21
26
38
35
11
8
1
2
0
10
20
30
40
Frequency
control
treatment

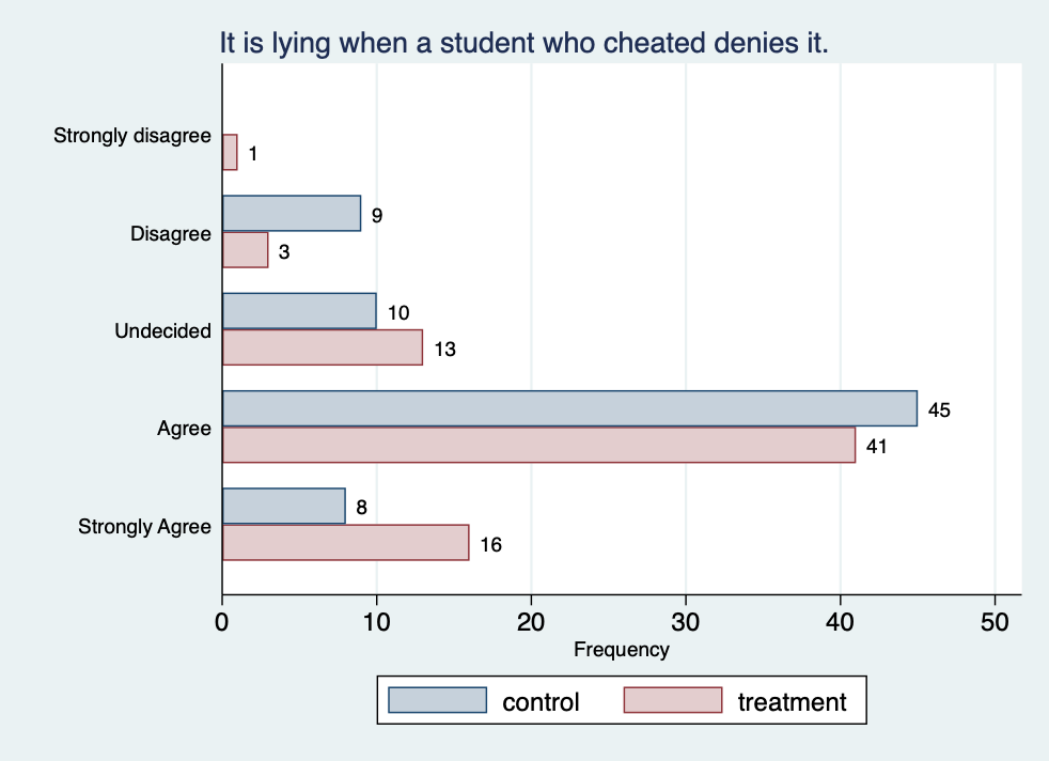

Students should report by name anyone seen cheating.
Strongly disagree
Disagree
Undecided
Agree
Strongly Agree
3
14
9
31
34
26
23
1
5
0
10
20
30
40
Frequency
control
treatment

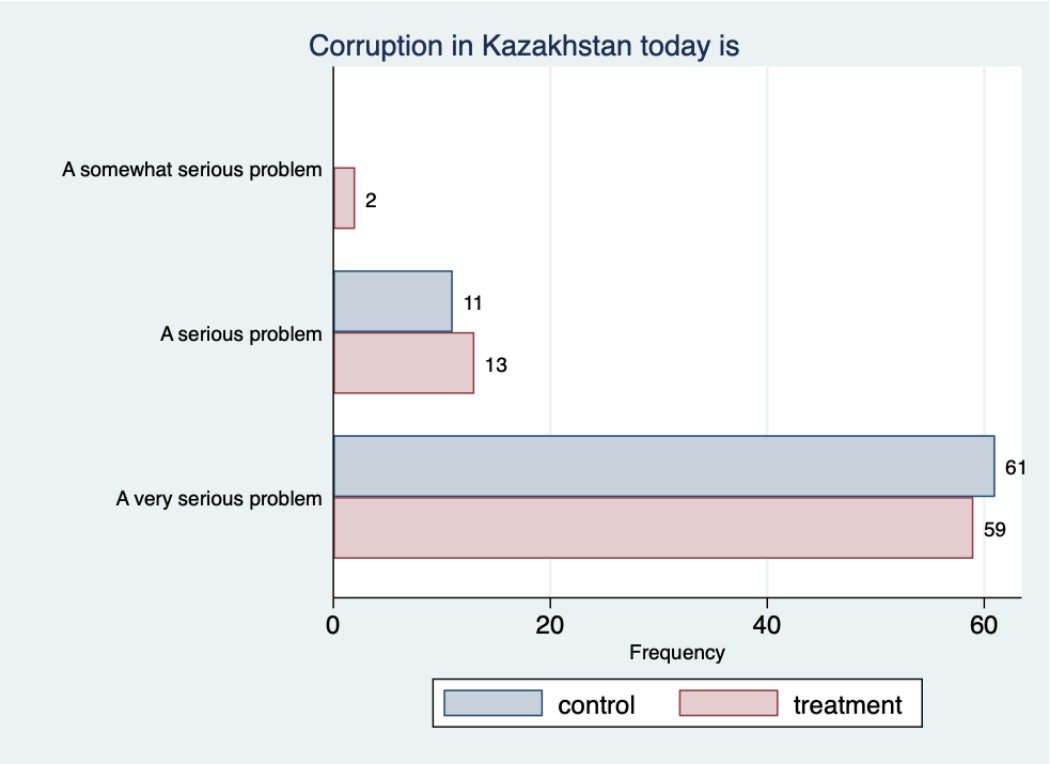

Most students who cheat are unethical people.
Strongly disagree
Disagree
Undecided
Agree
Strongly Agree
1
4
26
25
18
16
24
25
3
4
0
5
10
15
20
25
Frequency
control
treatment

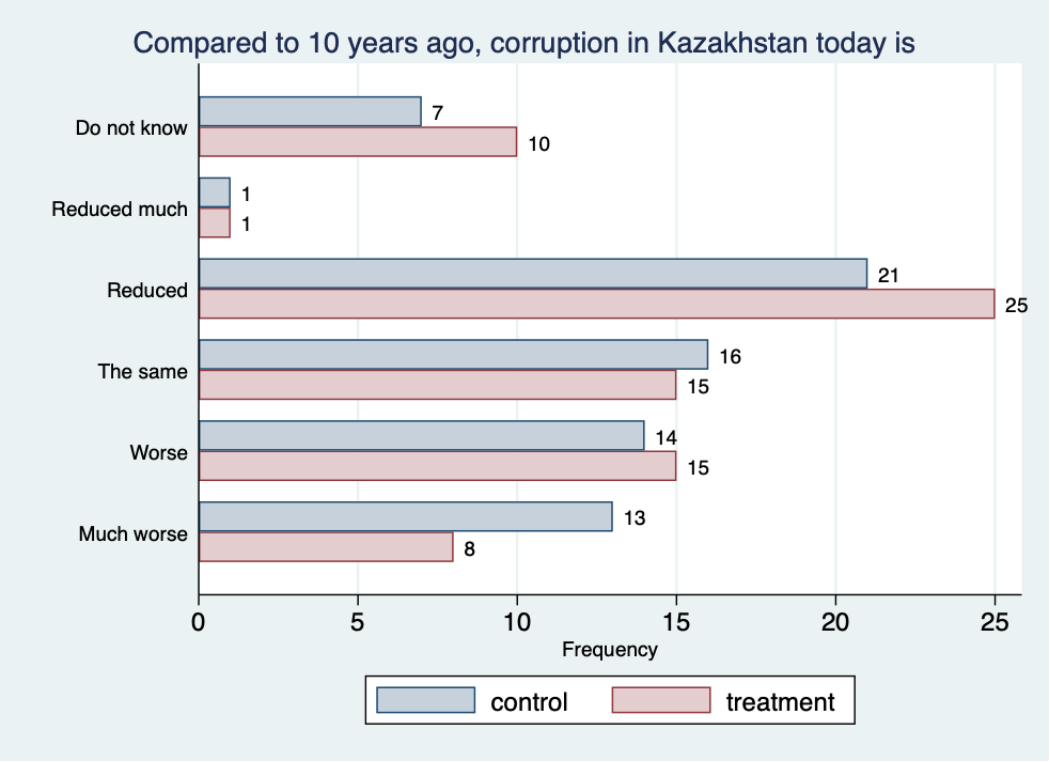

There is really nothing wrong with cheating, other than the risk of being caught.
Strongly disagree
Disagree
Undecided
Agree
Strongly Agree
22
23
42
40
5
8
3
1
2
0
10
20
30
40
Frequency
control
treatment

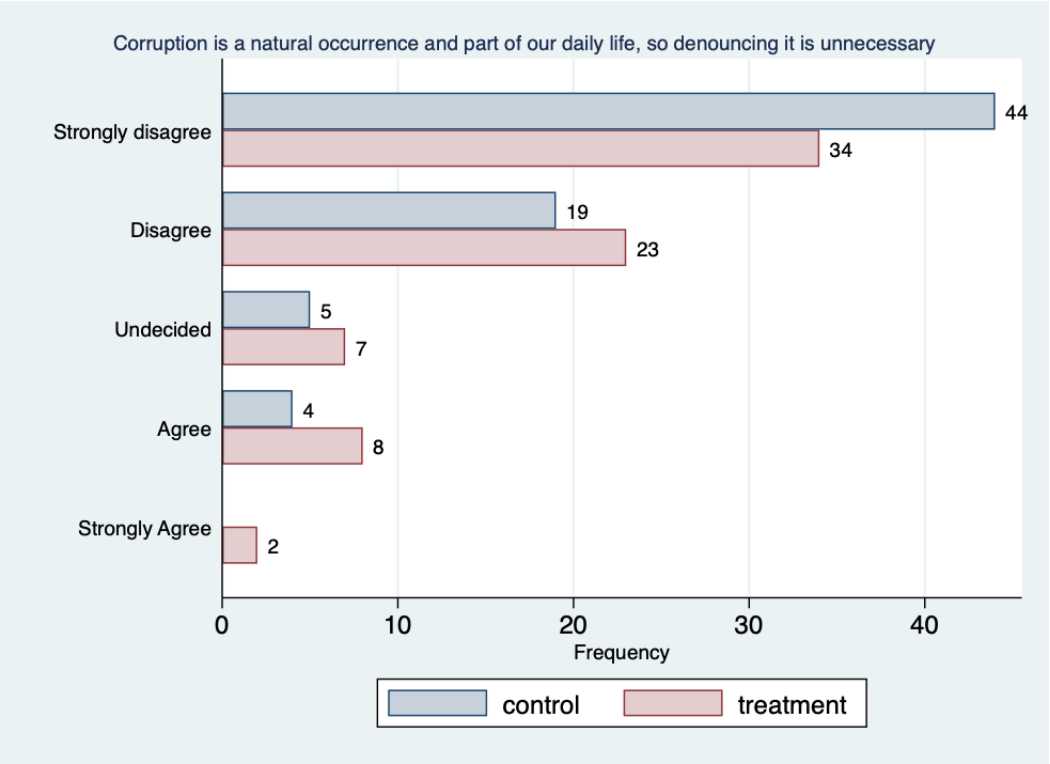

Most students who are accused of cheating are actually innocent.
Strongly disagree
Disagree
Undecided
Agree
7
3
38
37
25
29
2
5
0
10
20
30
40
Frequency
control
treatment

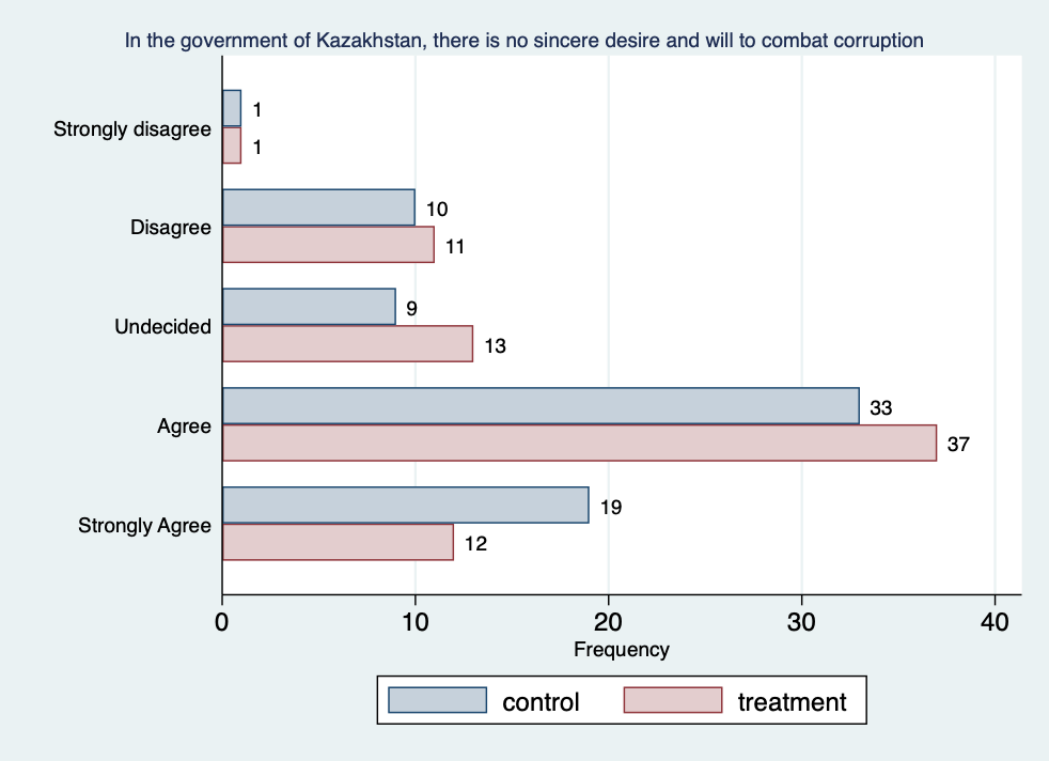

Most college students never cheat.
Strongly disagree
Disagree
Undecided
Agree
15
18
44
39
6
12
7
5
0
10
20
30
40
Frequency
control
treatment

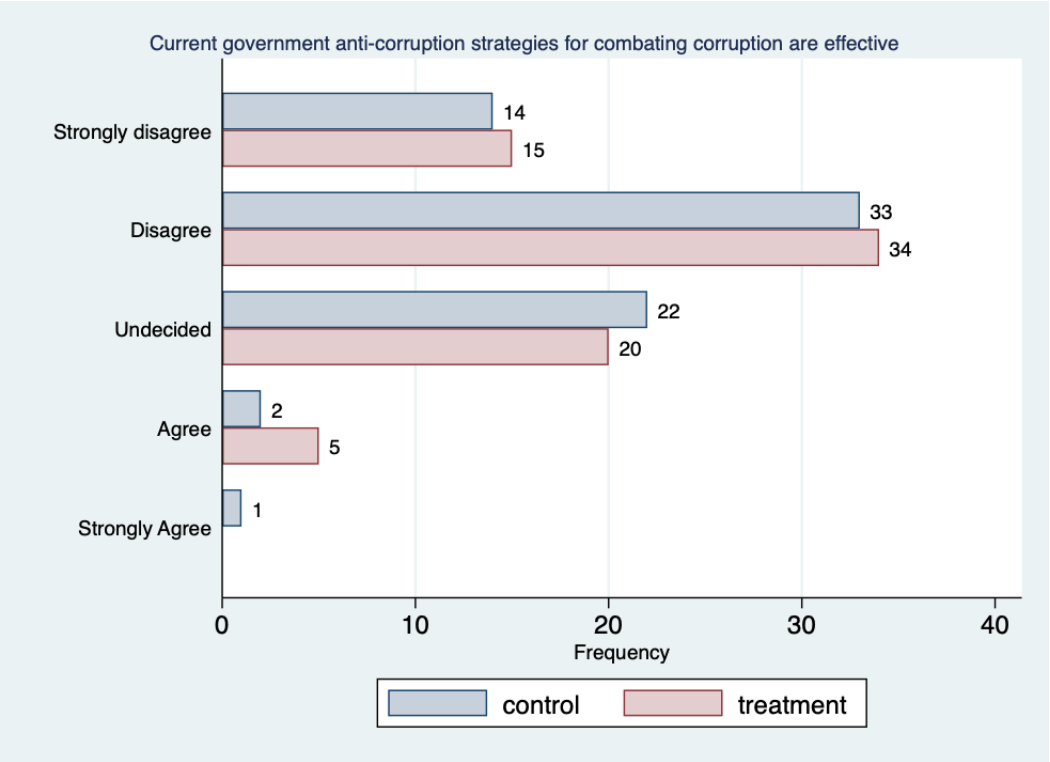

It is lying when a student who cheated denies it.
Strongly disagree
Disagree
Undecided
Agree
Strongly Agree
1
9
3
10
13
45
41
8
16
0
10
20
30
40
50
Frequency
control
treatment


Corruption in Kazakhstan today is
A somewhat serious problem
A serious problem
A very serious problem
2
11
13
61
59
0
20
40
60
Frequency
control
treatment


Compared to 10 years ago, corruption in Kazakhstan today is
Do not know
Reduced much
Reduced
The same
Worse
Much worse
7
10
1
1
21
25
16
15
14
15
13
8
0
5
10
15
20
25
Frequency
control
treatment


Corruption is a natural occurrence and part of our daily life, so denouncing it is unnecessary
Strongly disagree
Disagree
Undecided
Agree
Strongly Agree
44
34
19
23
5
7
4
8
2
0
10
20
30
40
Frequency
control
treatment


In the government of Kazakhstan, there is no sincere desire and will to combat corruption
Strongly disagree
Disagree
Undecided
Agree
Strongly Agree
1
1
10
11
9
13
33
37
19
12
0
10
20
30
40
Frequency
control
treatment



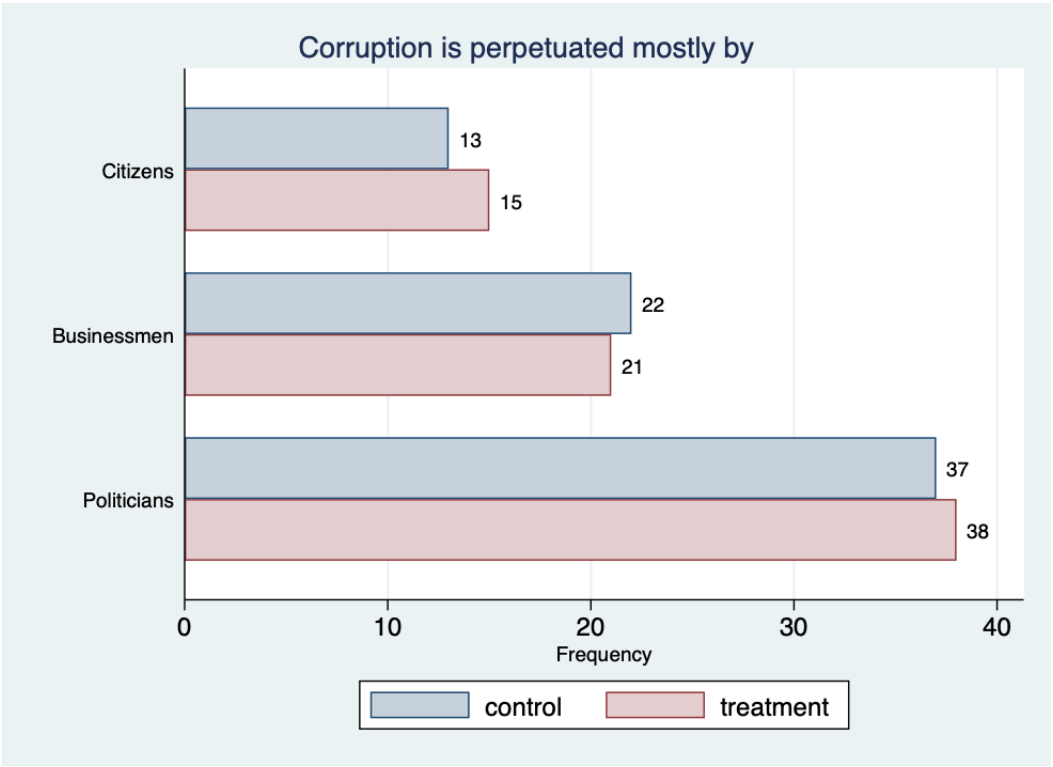
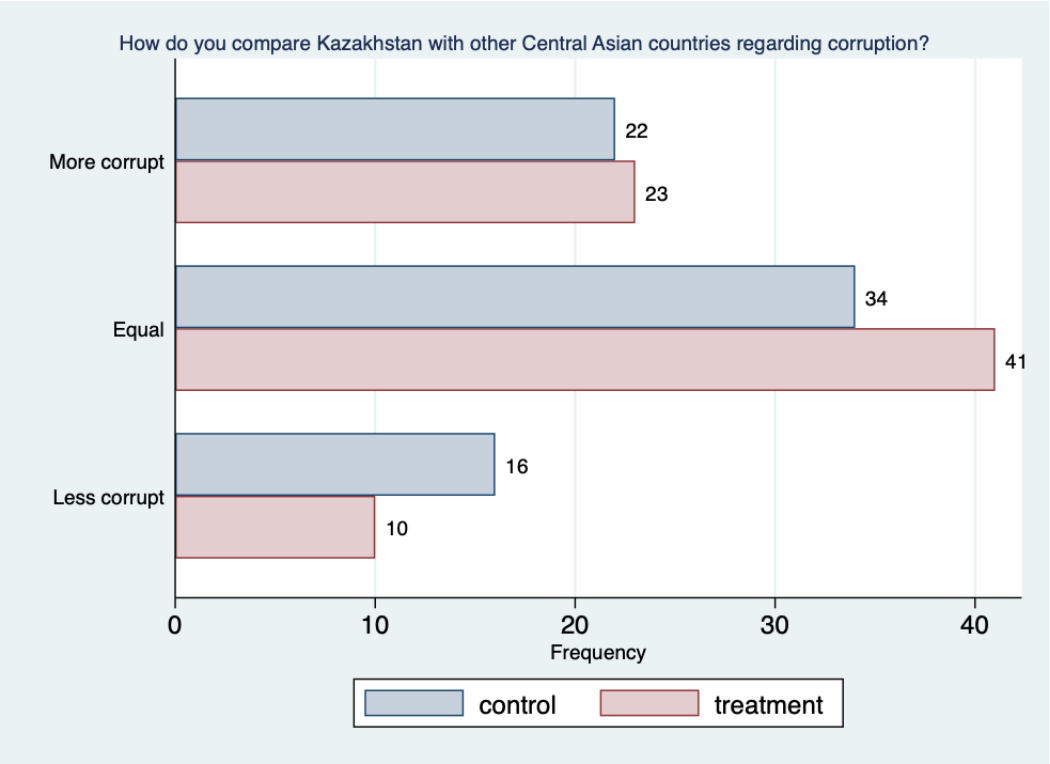
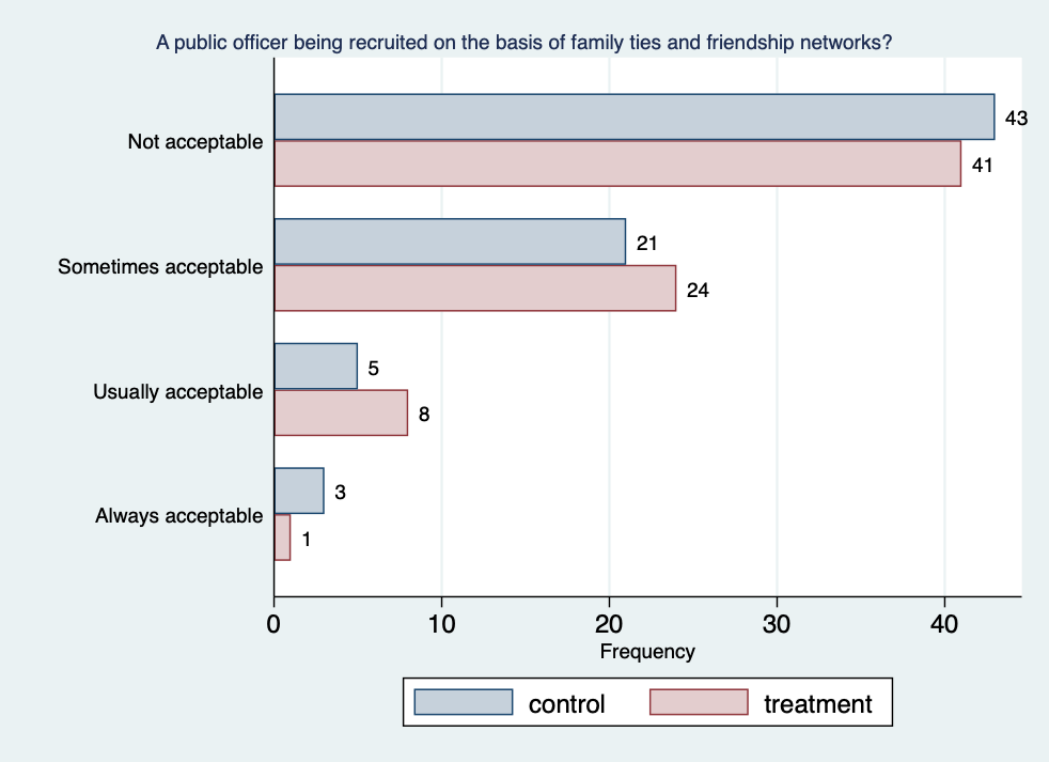
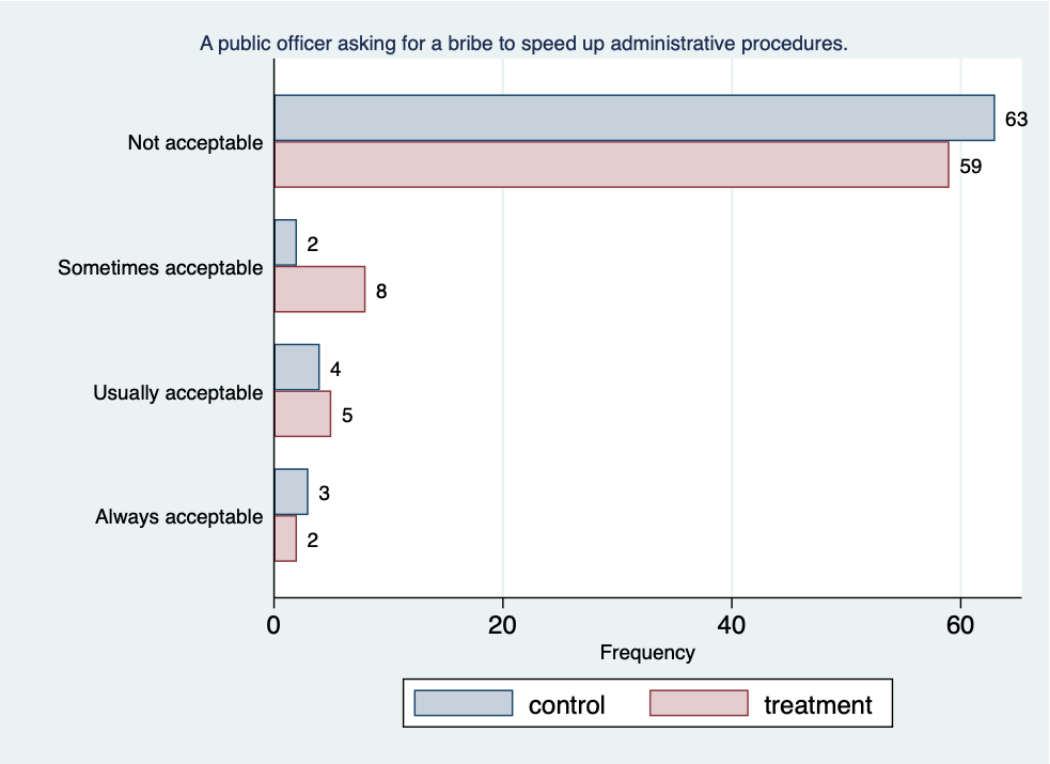
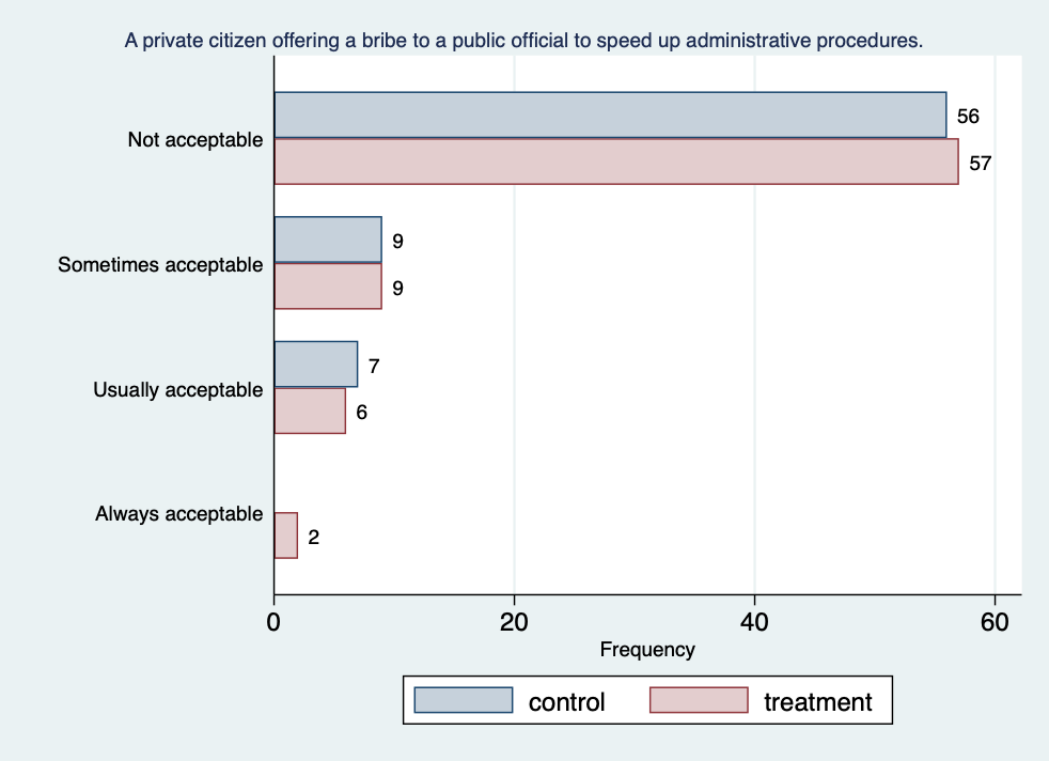


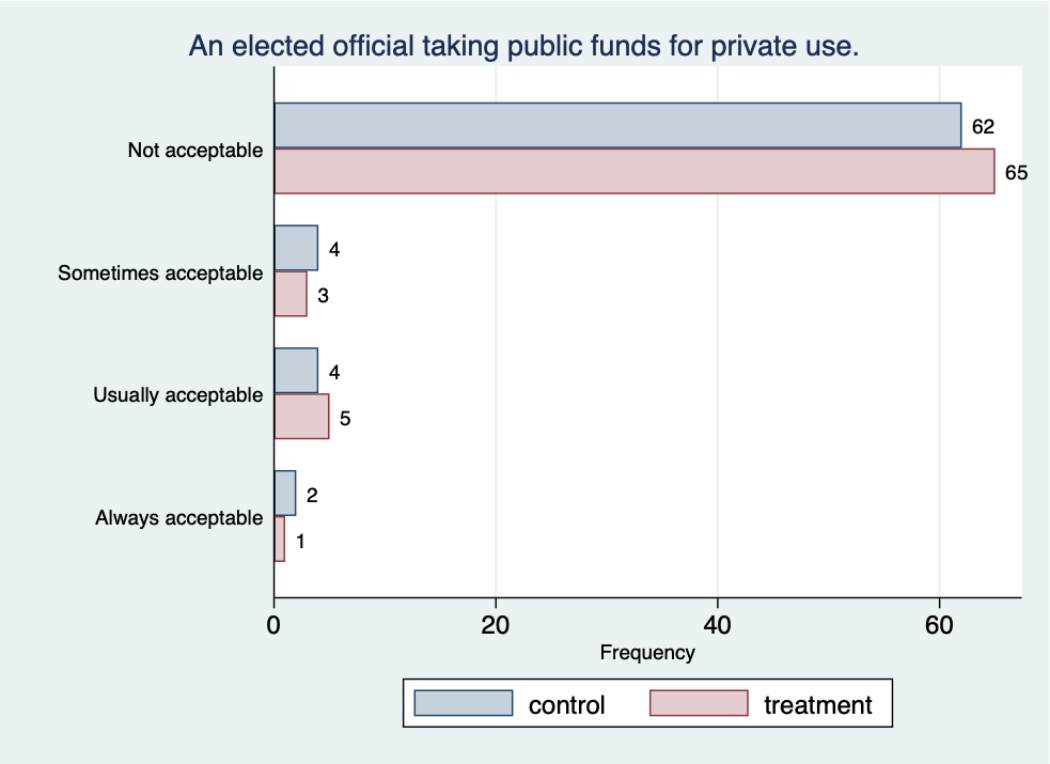
Figure 9.11: Corruption is perpetuated mostly by

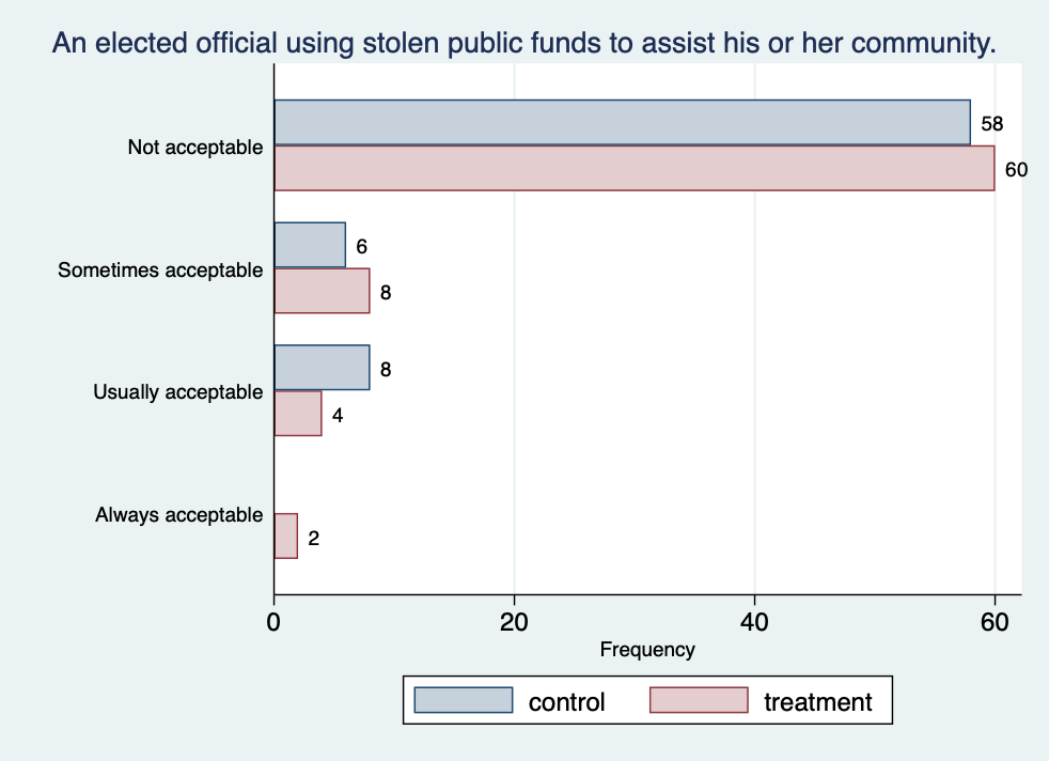

How do you compare Kazakhstan with other Central Asian countries regarding corruption?
More corrupt
Equal
Less corrupt
22
23
34
41
16
10
0
10
20
30
40
Frequency
control
treatment

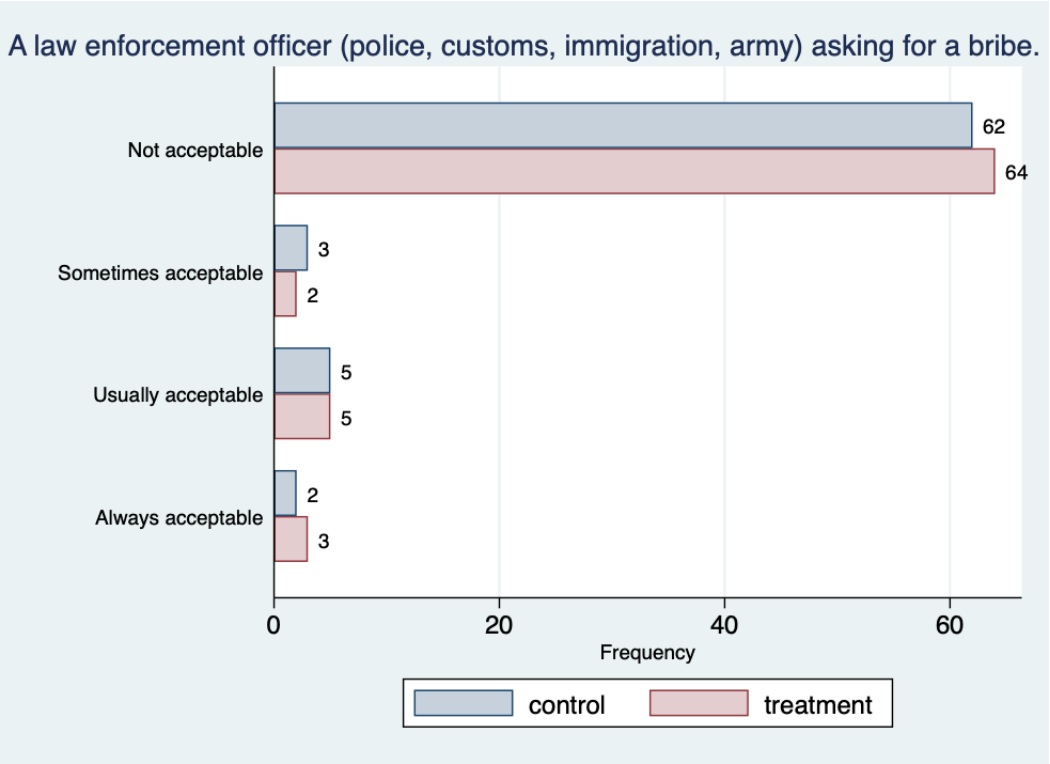

A public officer being recruited on the basis of family ties and friendship networks?
Not acceptable
Sometimes acceptable
Usually acceptable
Always acceptable
43
41
21
24
5
8
3
1
0
10
20
30
40
Frequency
control
treatment

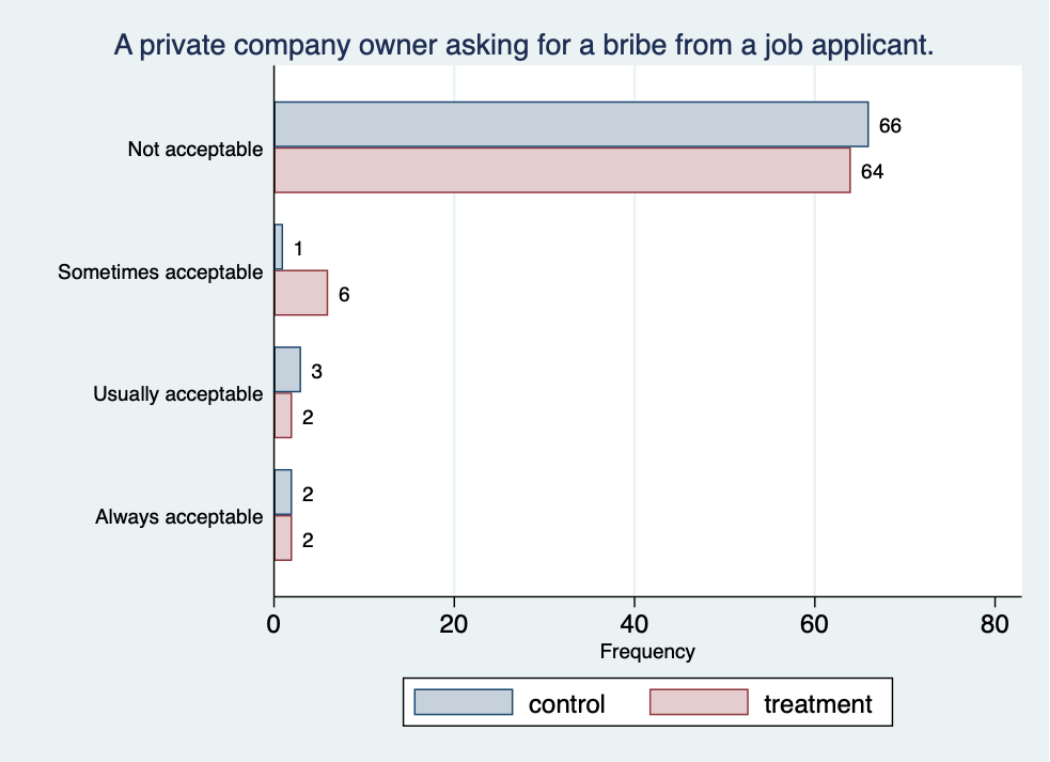

A public officer asking for a bribe to speed up administrative procedures.
Not acceptable
Sometimes acceptable
Usually acceptable
Always acceptable
63
59
2
8
4
5
3
2
0
20
40
60
Frequency
control
treatment

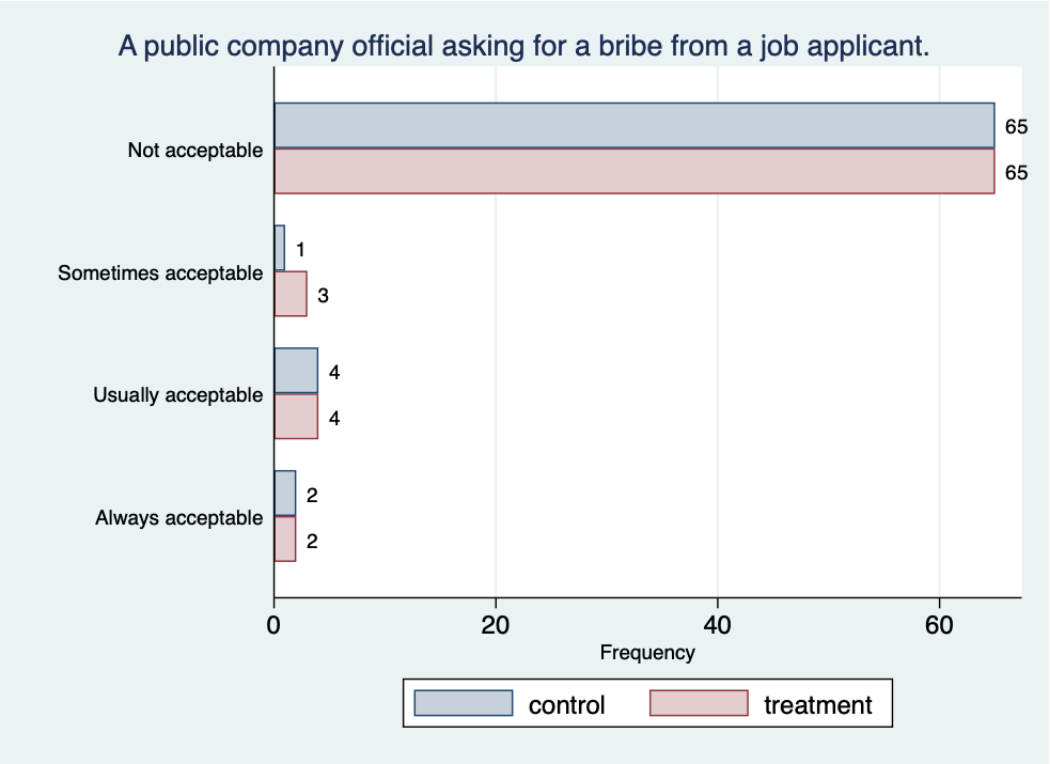

A private citizen offering a bribe to a public official to speed up administrative procedures.
Not acceptable
Sometimes acceptable
Usually acceptable
Always acceptable
56
57
9
9
7
6
2
0
20
40
60
Frequency
control
treatment

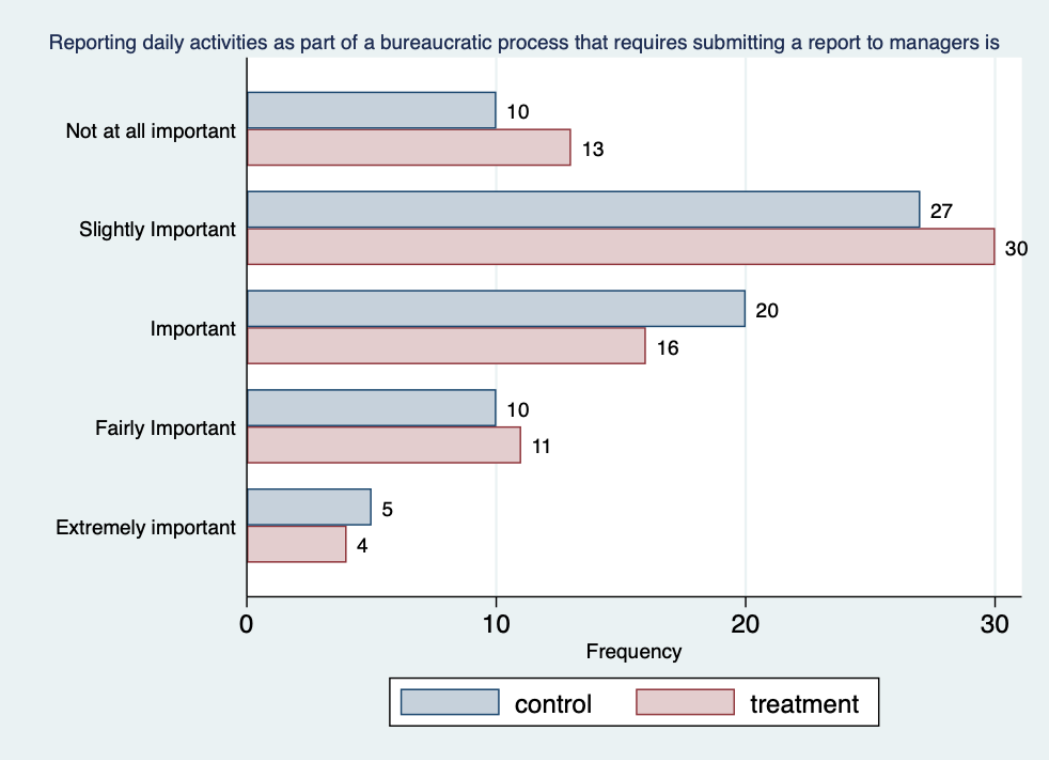

An elected official taking public funds for private use.
Not acceptable
Sometimes acceptable
Usually acceptable
Always acceptable
62
65
4
3
4
5
2
1
0
20
40
60
Frequency
control
treatment

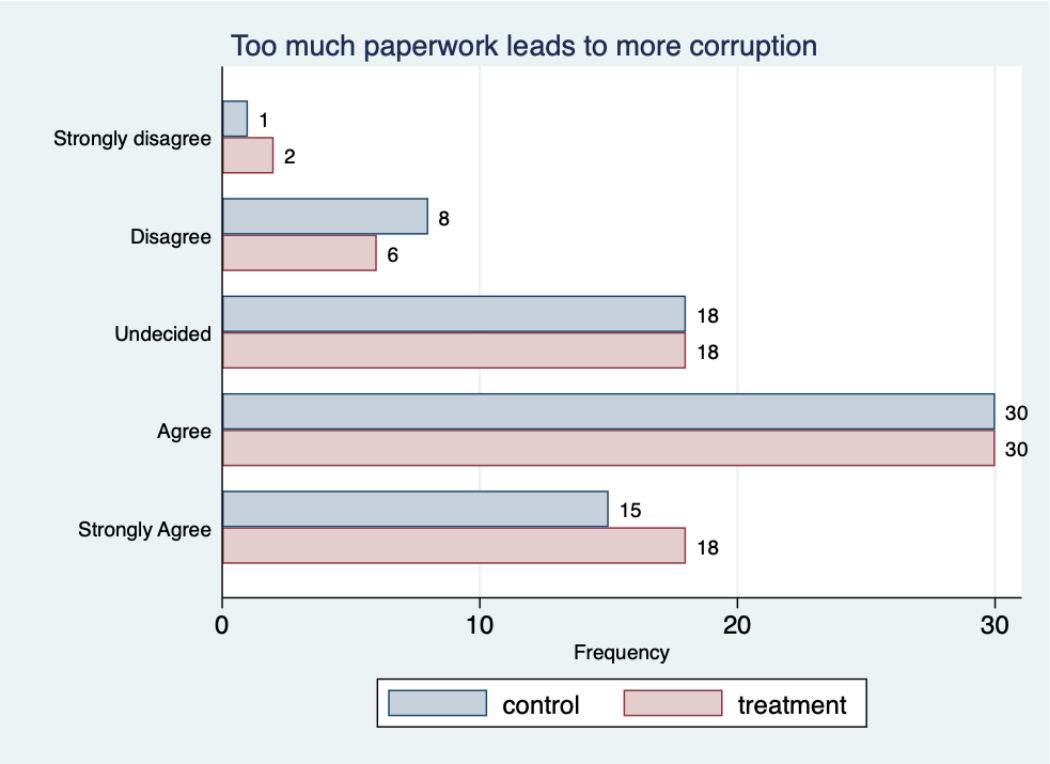

An elected official using stolen public funds to assist his or her community.
Not acceptable
Sometimes acceptable
Usually acceptable
Always acceptable
58
60
6
8
8
4
2
0
20
40
60
Frequency
control
treatment

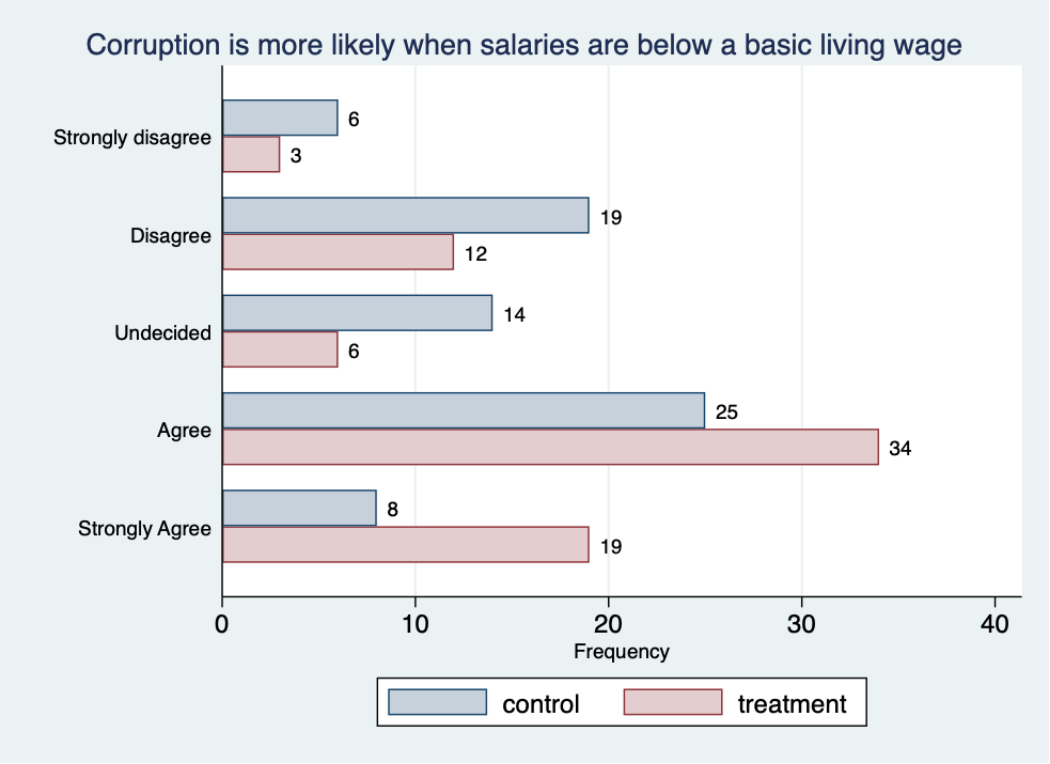

A law enforcement officer (police, customs, immigration, army) asking for a bribe.
Not acceptable
Sometimes acceptable
Usually acceptable
Always acceptable
62
64
3
2
5
5
2
3
0
20
40
60
Frequency
control
treatment

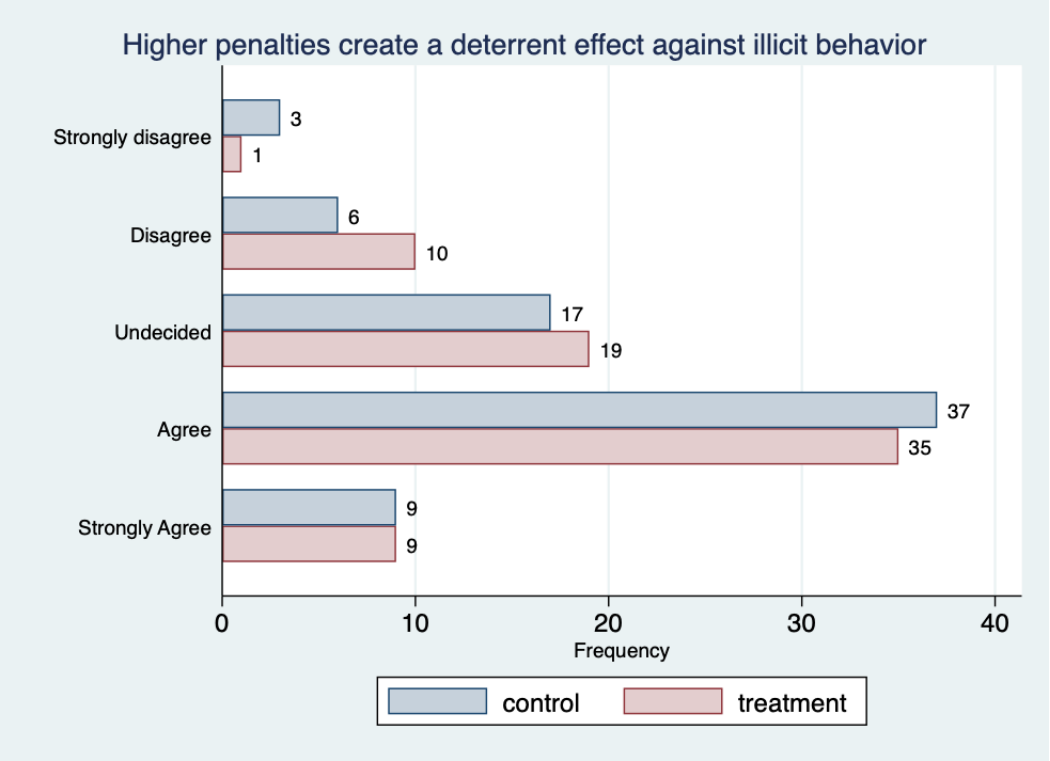

A private company owner asking for a bribe from a job applicant.
Not acceptable
Sometimes acceptable
Usually acceptable
Always acceptable
66
64
1
6
3
2
2
2
0
20
40
60
80
Frequency
control
treatment


A public company official asking for a bribe from a job applicant.
Not acceptable
Sometimes acceptable
Usually acceptable
Always acceptable
65
65
1
3
4
4
2
2
0
20
40
60
Frequency
control
treatment


Reporting daily activities as part of a bureaucratic process that requires submitting a report to managers is
Not at all important
Slightly Important
Important
Fairly Important
Extremely important
10
13
27
30
20
16
10
11
5
4
0
10
20
30
Frequency
control
treatment


Too much paperwork leads to more corruption
Strongly disagree
Disagree
Undecided
Agree
Strongly Agree
1
2
8
6
18
18
30
30
15
18
0
10
20
30
Frequency
control
treatment


Corruption is more likely when salaries are below a basic living wage
Strongly disagree
Disagree
Undecided
Agree
Strongly Agree
6
3
19
12
14
6
25
34
8
19
0
10
20
30
40
Frequency
control
treatment



9.3.3 Public Service Motivation index results

Table 9.1: Possible Indicators of PSM and Descriptive statistics (n = 146).

Dimensions and Items	Control Mean Std. dev.	Treatment Mean Std. dev.
APP - Attraction to public participation:		
APP1: I am interested in helping to improve public service	4.250 0.622	4.176 0.747
APP2: I am satisfied when I see people benefiting from the public programs I was involved in	4.500 0.628	4.338 0.688
APP3: I like to discuss topics regarding public programs and policies with others	3.611	3.932

Continued on next page

Table 9.1 – continued from previous page

Dimensions and Items	Control Mean Std. dev.	Treatment Mean Std. dev.
	1.042	0.800
APP4: I believe that public sector activities contribute to our general welfare	4.083	3.959
	0.645	0.711
APP5: I admire people who initiate or are involved in activities to aid my community	4.458	4.459
	0.627	0.623
APP6: Contributing to public programs and policies helps me realize myself	3.694	3.662
	0.799	0.848
APP7: It is important to contribute to activities that tackle social problems	4.292	4.270
	0.568	0.708
CPV		
Sub-dimension for Public Interests (CPV1)		
CPI1: Meaningful public service is not important to me	2.139	2.000
	1.079	1.020
CPI2: It is not important for me to contribute to the common good	2.069	2.230
	0.828	1.001
CPI3: I would prefer seeing public officials do what is best for the whole community, even if it harmed my interests	3.514	3.486

Continued on next page

Table 9.1 – continued from previous page

Dimensions and Items	Control Mean Std. dev.	Treatment Mean Std. dev.
	0.919	0.940
CPI4: Serving the public interest is more important than helping a single individual	3.458	3.419
	0.948	1.060
Sub-dimension for Public Interests (CPV2)		
CPV1: I think equal opportunities for citizens are very important	4.778	4.554
	0.451	0.724
CPV2: It is important that citizens can rely on the continuous provision of public services	4.222	4.135
	0.736	0.816
CPV3: It is not fundamental that public services respond to the needs of citizens	1.986	1.892
	0.813	0.959
CPV4: Decisions regarding public services should be democratic despite the time and effort it takes	3.903	3.946
	0.891	0.792
CPV5: Everybody is entitled to a good service, even if it costs a lot of money	3.694	3.500
	0.762	0.832

Continued on next page

Table 9.1 – continued from previous page

Dimensions and Items	Control Mean Std. dev.	Treatment Mean Std. dev.
CPV6: It is not fundamental that the interests of future generations are taken into account when developing public policies	2.083 0.746	2.081 0.872
CPV7: To act ethically is not essential for public servants	1.542 0.604	1.743 0.861
CPV8: I believe that public employees must always be aware of the legitimacy of their activities	4.417 0.727	4.446 0.553
CPV9: I personally identify with the aim of protecting individual liberties and rights	3.903 0.715	3.932 0.709
Compassion (COM)		
COM1: It is difficult for me to contain my feelings when I see people in distress	3.514 0.964	3.568 0.980
COM2: I do not feel sympathetic to the plight of the underprivileged	1.917 0.707	2.243 0.948
COM3: I empathize with other people who face difficulties	4.014 0.617	3.986 0.630

Continued on next page

Table 9.1 – continued from previous page

Dimensions and Items	Control Mean Std. dev.	Treatment Mean Std. dev.
COM4: I have little compassion for people in need who are unwilling to take the first step to help themselves	3.486 1.035	3.419 1.060
COM5: I get very upset when I see other people being treated unfairly	4.347 0.609	4.297 0.677
COM6: Considering the welfare of other is not important	1.931 0.699	2.176 0.984
Self-Sacrifice (SS)		
SS1: Making a difference to society means more to me than personal achievements	3.264 1.035	3.270 1.138
SS2: I am prepared to make sacrifices for the good of society	3.347 0.790	3.257 0.937
SS3: I do not believe in putting civic duty before self	2.931 0.909	2.919 1.004
SS4: I am not willing to risk personal loss to help society	3.181 0.828	3.081 0.990

Continued on next page

Table 9.1 – continued from previous page

Dimensions and Items	Control Mean Std. dev.	Treatment Mean Std. dev.
SS5: People should not give back to society more than they get from it	2.514 0.872	2.554 0.924
SS6: Serving other citizens would give me a good feeling even if no one paid me for it	3.708 0.846	3.622 1.043
SS7: I would agree to a good plan to make a better life for the poor, even if it costs me money	3.681 0.747	3.770 0.750

9.3.4 Demographics questions results

Table 9.2: Demographics questions results

	(1)	(2)	(3)
Participants	Control: 72	Treatment: 74	Total: 146
Age	Min: 19	Max: 42	Average: 24
Gender	Female: 77	Male: 69	
Marital status	Single: 117	Married: 29	
Major	Related to PA**: 31	Other: 115	
Hometown	Nur-Sultan city: 21	non Nur-Sultan: 125	
Number of children	Zero: 135	One: 6	> than 1: 5
Academic*	BSc: 80	MSc: 55	PhD: 10
GPA	4.00-3.50: 51	3.50-3.00: 61	< than 3.00: 33
Mother education***	BSc: 96	MSc: 20	PhD: 7
Father education***	BSc: 85	MSc: 16	PhD: 8
Employment status****	Private: 35	Public: 20	Unemployed: 64
Public service years employed	Zero: 120	One: 10	> than 1: 16
Monthly income (in tenge)	0-50K: 55	50K-150K: 46	150K and >: 45
Mother employment****	Private: 24	Public: 60	Unemployed: 34
Father employment****	Private: 35	Public: 47	Unemployed: 35

Notes: *Non-degree: 1 person.
**Field study relative to Public Administration: Sociology, Public Policy, Political Science and International Relations, Public Administration, MBA, International relations, Finance, Economics.
***Mother education: Non-degree: 23. Father education: Non-degree: 37.
****Employment status: Self-employed: 27. Mother employment: self-employed: 28. Father employment: self-employed: 29.

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