USE OF THE BTS METHODOLOGY FOR MONITORING OF BUSINESS PERCEPTIONS TOWARDS CORRUPTION IN UKRAINE[1]

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Abstract

Ukraine is perceived as highly corrupt country where political, grand and petty corruption has become an integral element to social interaction. Corruption causes losses to both the State and its population due to inefficient use of budget funds and low level of government services as well as piles uncertainty in the environment where economic agents and households function. Excessive regulation is one of the key contributors to corruption at enterprise level. International studies demonstrate that excessive regulation of business activity promotes corruption. The more procedures a business needs to go through and the longer these procedures take, the more likely it is that the level of corruption in the country is high. This assumption is backed by findings of the 2009 World Bank Investment Climate Research Study[3]. The cause and effect link here works in both directions: government regulation of business generates corruption, and corruption can lead to the government introducing a regulation promoting one company or sector at the expense of others or at the expense of the population in general[4]. That is why deregulation is an important tool in the anti-corruption framework, as it reduces the possibilities for abuse. Developing instrument for monitoring and evaluating the business climate, regulatory environment identification of barriers to business development to compile a list of top-priority economic, legal, and regulatory reforms based on feedback from business as main stakeholder of reform is among key priorities of public policy agenda in the country.

In the article, we describe of our experience in construction of corruption perceptions' indicators, present the indicators based on results of last decades BTS survey. In addition, we try to compare the indicators of regulatory climate and corruption perceptions (Annual Indicator of Business Environment Burdens and Annual Corruption Perception Indicators) with IER Industrial Confidence Indicator and IER Index of Business Condition that based on BTS data. It is important to check the hypothesis that in complicated regulatory climate the corruption perceived by enterprises as way to solve a problem of excessive, unclear and complicated regulations, and not as single problem. It is important message that should be taken into account when anti-corruption measures are developed in the country. In terms of real policymaking

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[3] http://blogs.worldbank.org/psd/restrictive-regulation-is-positively-correlated-to-corruption

[4] M. Bédard, Less regulation and more competition to curb corruption, MEI May 2016, https://www.iedm.org/sites/default/files/pub_files/lepoint0816_en.pdf

process in Ukraine such message means that measure aimed at deregulation of economy should be successfully completed.
Key Words: *Business Tendency Survey, Expectations, Confidence Indicators, Business Climate Index, Business Conditions Index, Corruption Perceptions, SME, Ukraine*

1. Introduction

Ukraine is perceived as highly corrupt country where political, grand and petty corruption has become an integral element to social interaction. Corruption causes losses to both the State and its population due to inefficient use of budget funds and low level of government services as well as piles uncertainty in the environment where economic agents and households function. Excessive regulation is one of the key contributors to corruption at enterprise level. International studies demonstrate that excessive regulation of business activity promotes corruption. The more procedures a business needs to go through and the longer these procedures take, the more likely it is that the level of corruption in the country is high. This assumption is based by findings of the 2009 World Bank Investment Climate Research Study[5]. The cause and effect link here works in both directions: government regulation of business generates corruption, and corruption can lead to the government introducing a regulation promoting one company or sector at the expense of others or at the expense of the population in general[6]. That is why deregulation is an important tool in the anti-corruption framework, as it reduces the possibilities for abuse. Developing instrument for monitoring and evaluating the business climate, regulatory environment identification of barriers to business development to compile a list of top-priority economic, legal, and regulatory reforms based on feedback from business as main stakeholder of reform is among key priorities of public policy agenda in the country. Business tendency surveys (BTS) are the source of information about the state and future progress of selected economic indicators based on the enterprise managers' opinions and expectations and can serve as such tool of monitoring.

The Institute for Economic Research and Policy Consulting used the BTS to tracing business perceptions on different topics. Based on more than 20 years' experience on conducting business tendency survey the IER has designed several instruments that allowing to monitoring of business expectations and attitudes toward the main economic issues as well as measure the quality of business climate including corruption related issues. Perceptions of corruption based on informed views of relevant managers and their actual experiences with it are sometimes the best way to gather the information about corruption.

IER business tendency survey is conducted quarterly. In each quarter, the questionnaire consists in two parts. The first is the regular questions regarding enterprises performance and expectations about future change of the performance. In this part, there is question about impediments to business development, where the corruption is among other 15 options of impediments. We use this variable of corruption as single indicator as well as part of composite indicator "quarterly regulatory climate". The second part of the IER BTS questionnaire consists in questions regarding so called special topics that vary from quarter to quarter. The questions regarding different aspect of business and investment climate including perceptions regarding corruption[7] are asked on annual base in the 1st quarter survey since 2003 in April. As result, the

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[5] http://blogs.worldbank.org/psd/restrictive-regulation-is-positively-correlated-to-corruption

[6] M. Bédard, Less regulation and more competition to curb corruption, MEI May 2016,
https://www.iedm.org/sites/default/files/pub_files/lepoint0816_en.pdf

[7] We use adopted for Ukraine questions based on approach describe in Hellman et al., Measuring Governance Corruption, and State Capture, 1999
http://siteresources.worldbank.org/INTWBIGOVANTCOR/Resources/measure.pdf

set of indicators that describe the business climate and corruption was developed. The list of indicators with periodicity in brackets is below:

1. Corruption as impediment to business development (quarterly)
2. Quarterly regulatory climate (quarterly)
3. Annual Indicator of the Institutionalization of Corruption (annually, data collected in April)
4. Annual Corruption Perception Indicator (annually, data collected in April)
5. Annual Indicator of Regulatory Burdens (annually, data collected in April)
6. Security of property rights (annually, data collected in April)
7. Annual Indicator of Business Environment Burdens (annually, data collected in April)

At the same time, quarterly, the IER collect data and calculate Industrial Confidence Indicators (which is calculated as the arithmetic average of the balances (in percentage points) of responses on questions about production plans, the assessment of order books and stocks of finished products (the latter with inverted sign). In addition, we produce the Index of Business Conditions (which is calculated as the arithmetic average of assessment of current business situation at the firm and expected change of it in 6 months perspective).

In the next sections we have briefly describe the indicators of corruption and regulatory environment, show there fluctuations and try to test several hypotheses about relations between different indicators.

2. IER approach to monitoring of corruption perceptions

2.1.Quarterly indicators

1. CORRUPTION AS IMPEDIMENT TO BUSINESS DEVELOPMENT. We ask firms` managers about the most limiting factors to the growth of their business, where corruption is included as one of the limits. Corruption is one out of 15 options of impediments to business development. Single variable "corruption as impediment to business development" allows understanding how problematic is corruption for the doing business for Ukrainian enterprises against the background of other barriers. For example, such as "economic" impediments as demand, capital, labor force etc or institutional ones as political instability, stability (predictability) of legislative environment etc.

2. QUARTERLY REGULATORY CLIMATE. Variable "corruption" is part of composite index named "regulatory climate". The composition of index based on experts' assessment of the regulatory climate in Ukraine. In particular, it is important to take into account enterprise manages self-assessment of regularity pressure, predictability and certainty of legislation environment and assessment of impact corruption on doing business. As result, this index consists of three components: (1) high regulatory pressure. (2) frequent changes in legislation and (3) corruption and reflects the proportion of respondents who chose at least one of the factors from list of impediments to business development (see Annex 3).

2.2.Annual indicators

(3) ANNUAL INDICATOR OF THE INSTITUTIONALIZATION OF CORRUPTION has been constructed and calculated since 2003 until now. Constructing the annual indicators, we proceeded from the assumption that corruption is a reaction to excessive regulation. That is, entrepreneurs, in order to reduce their administrative costs in a regulatory environment that has internal contradictions, is

complex and confusing, it creates a "cooperative" with government officials. Who, in turn, perceive their service as a business of providing services for their own enrichment. Under such conditions, corruption acts as a parallel institution that helps "solve the issue" quickly. In this case, the more reliable such "parallel system", the clear rules in it. That is, the phenomenon is widespread, tariffs for "services" are known and service recipients are sure of the result. This suggested that indicators could be found to measure in what extend corruption could be perceived as a social institution. So the idea of building an indicator of institutionalization of corruption arose. We have been looking for suitable dimensions for a long time, and then, after having studied literature, interviews with experts, interviews with business representatives, we have identified four variables: (3.1) absolute level of corruption, (3.2) unpredictability of unofficial payments, (3.3) uncertainty about the consequences of a corrupt act and (3.4) informal relationships with representatives of government. These variables are reflect the following data:

   • % of firms that admit paying bribes by themselves or say that this is typical for their sector,
   • % of firms that are unsure about the outcome (result) of bribe,
   • % of firms that consider bribe sum unstable,
   • % of firms that admit importance of informal relation with at least one authority from list (implicit corruption).

All variables are measured by score from 1 (not important) to 5 (very important).

To be test the possibility to combine the abovementioned variable we have applied principle component method. The simple correlation analysis supports the thesis, the existence of a link between the widespread of corruption and the extent to which the bribe is stable and how bribe-giver is sure of the outcome. 3 of the 4 variables have an upper level correlation with a "hidden" variable (see details in Annex 2). While the "importance of informal relations" has a quite low correlation. However, given the meaningful importance of this indicator, we decided to keep all variables in the new indicator. We present these data in form of in form of geometrical figure rhombus (see Annex 2) and calculate the value of Indicator of the Institutionalization of Corruption as square of rhombus divided by 100.

**Table 1. Some results of factor analysis (INDICATOR OF THE INSTITUTIONALIZATION OF CORRUPTION)**

INDICATOR OF THE INSTITUTIONALIZATION OF CORRUPTION	
Name of variable	Correlation with "hidden" variable
Absolute level	-.900
Uncertainty of corruption outcome	.750
Unpredictability of bribes size	.897
Unformal relations	-.418

Extraction Method: Principal Component Analysis.

Another annual indicator of corruption is (4) ANNUAL INDICATOR OF CORRUPTION PERCEPTIONS that describe how corruption is widespread according to enterprise manages opinions. It is calculated as the arithmetic mean of two variables: absolute level of corruption and informal relationships with representatives of government. First variable is results of answers on question "Is that corruption is typical for such enterprises as yours?", the second variable is answers on question "Is that important for get success in business in our country to have

unformal relations with representatives of the state bodies. The both variables are measured by score from 1 (not important) to 5 (very important).

Figure 1.   Annual Indicators of corruption
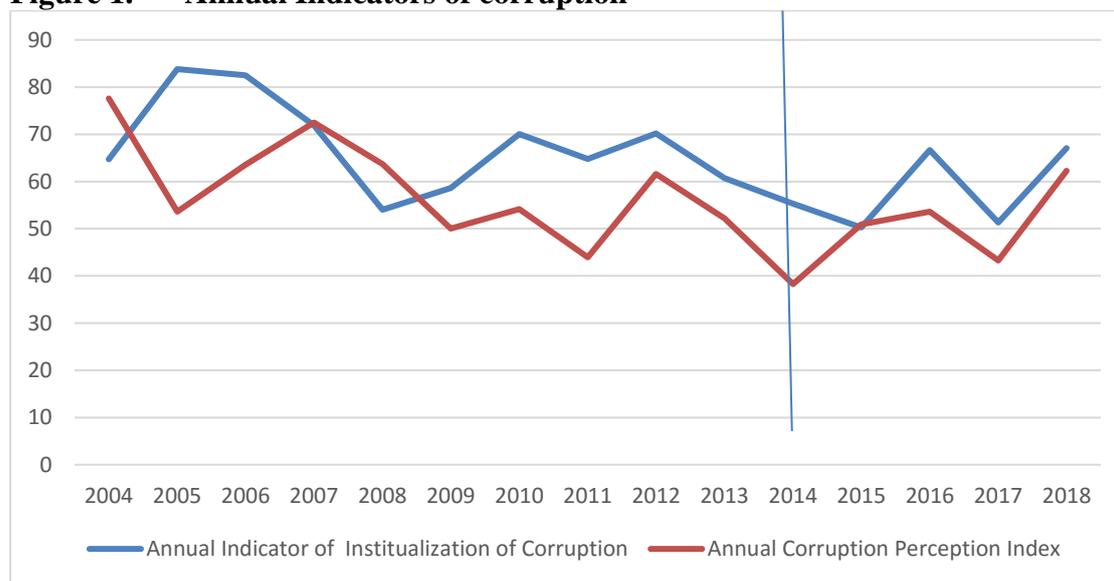
Source: IER BTS

In addition, we ask about the share of bribes in the overall turnover of the enterprise. However, given the high fluctuation of this response and the different responses in different years, this indicator is not used for regular analysis.

The next indicators (indexes) are describe the regulatory environment. It is important to measure the business opinions respecting this issue due to our assumption that corruption is reaction on improper regulation.

(5) ANNUAL INDICATOR OF REGULATORY BURDENS. We investigate regulatory burden across the following variables[8]: 1) level of indirect state interference (% of enterprises that indicate the interference of the state in operating activities), 2) predictability and clarity of regulations (% of enterprises that consider economic legislation unclear and unpredictable), and 3) time tax (% of managers' time spent on interaction with government officials.

To test the possibility to combine the abovementioned variables we have applied principle component method. In contrast to Indicator of the INSTITUTIONALIZATION OF CORRUPTION, the result of factor analysis shows the respectively high correlation of these variables with "hidden" variable. As result, we decided to calculated indicator as arithmetic mean of abovementioned single variables. In table 2 the some results of factor analysis for the both composite indicators are presented. The more details are in the Annex 2 and Annex 3.

Table 2. Some results of factor analysis (ANNUAL INDICATOR OF REGULATORY BURDENS)

ANNUAL INDICATOR OF REGULATORY BURDENS	
Name of variable	Correlation with "hidden" variable
"Time tax"	.610
Unpredictability of legislation	-.855
State interference	.927

Extraction Method: Principal Component Analysis.

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[8] In our survey, we avoid from looking at the changes in registration procedures and quantity of regular/irregular controls by regulatory bodies, since progress in this area is well recorded by other analysts.

(6) SECURITY OF PROPERTY RIGHTS indicator is calculated as arithmetic mean of two indicators: 1) assessment of ability of judicial system to ensure enforcement of commercial contracts; 2) assessment of ability of judicial system to protect personal security and security of business entities against criminality

Finally, the (7) ANNUAL INDICATOR OF BUSINESS ENVIRONMENT BURDENS is calculated as the arithmetic mean of such components:
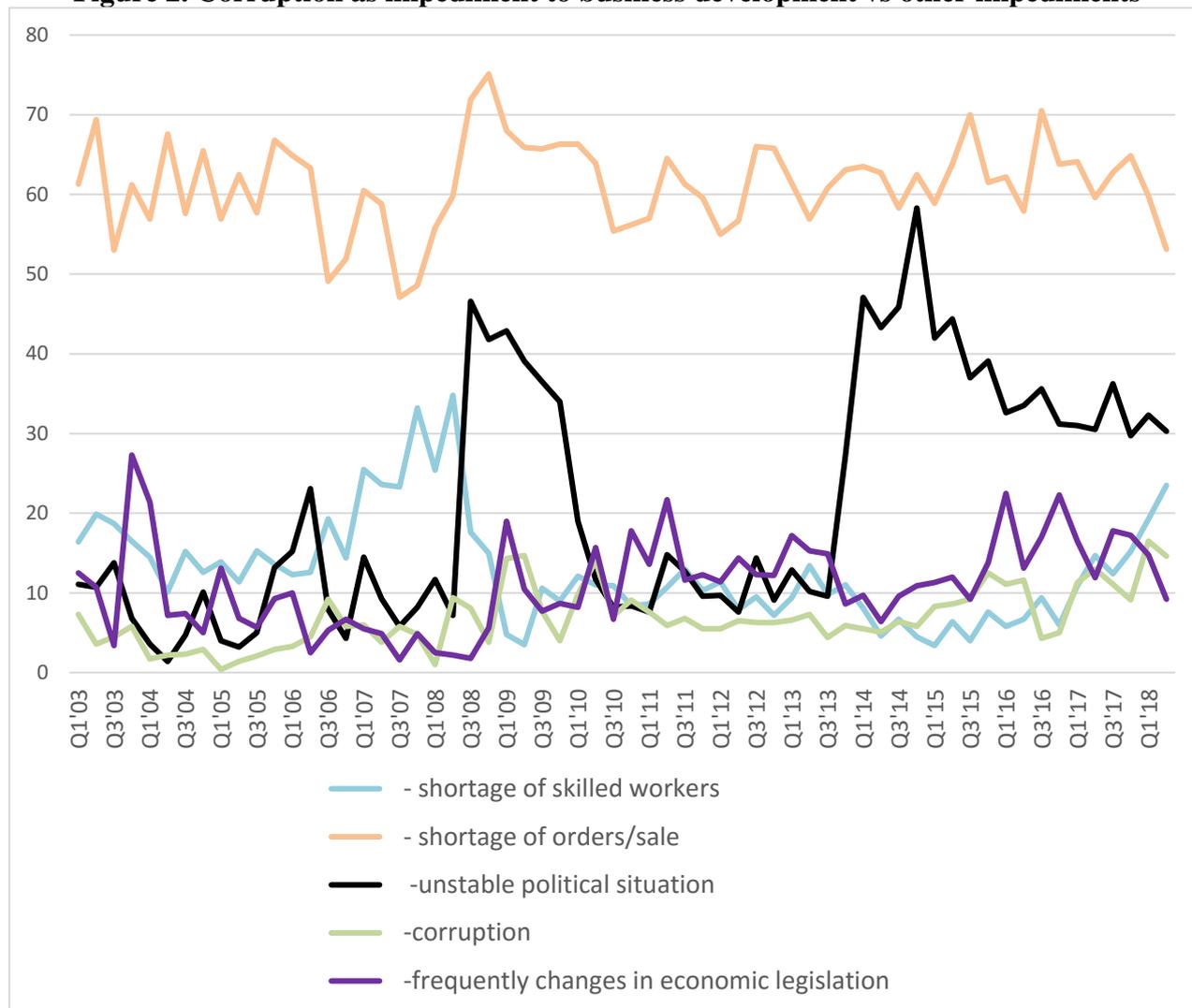
- Security of property rights

- Annual Corruption Perception Indicator
- "Time tax"
- Unpredictability of regulations
- State interference
-

Annual INDICATOR OF BUSINESS ENVIRONMENT BURDENS is measured on a scale from 0 to 100, where 0 is no burdens and 100 is completely burdened environment. Therefore, the lower values the indicator the better business climate.

2.3. Analysis of quarterly indicators

Corruption as an obstacle to the growth of production has never been one of the main obstacles. The list of obstacles traditionally led by such barriers as insufficient demand, liquidity problems and other purely economic factors. In the period of 2014-2016, the top three leaders of the rating included a factor characterizing the instability of the political situation. This is due to Russia's military aggression against Ukraine. However, since 2017, the weight of this factor is decreasing. Corruption ranged from 12 to 8 among 15 possible factors. The figure 1 presents the dynamics of the factor "corruption" and other factors characterizing the regulatory environment in comparison with the factor leading the list of barriers "lack of demand", and an important factor of "shortage of labor". The data obtained in July 2018 indicate an increase in the predictability of the business environment (the value of the obstacle "frequent changes in legislation" has diminished) and the reduction of the weight of obstacles to corruption for enterprises. The regulatory climate in the quarterly dimension is improving.

**Figure 2. Corruption as impediment to business development vs other impediments**

- shortage of skilled workers
- shortage of orders/sale
- unstable political situation
- corruption
- frequently changes in economic legislation

Source: IER BTS

2.4. Analysis of annual indicators

The overall picture of the problem of the business environment is presented in the star chart in the Figure 3 where the axis reflects the indicators. In 2018, the level of corruption, the level of state interference and time tax have increased in comparison with 2107. At the same time, there are two important improvements. The issue of non-compliance with property rights has decreased. Legislation that affects the activities of the company has become much simpler and more comprehensible. These two opposite trends led to the fact that the value of the indicator of business environment burdens did not change in comparison with last year and was 44.9 (44.8 in 2017).
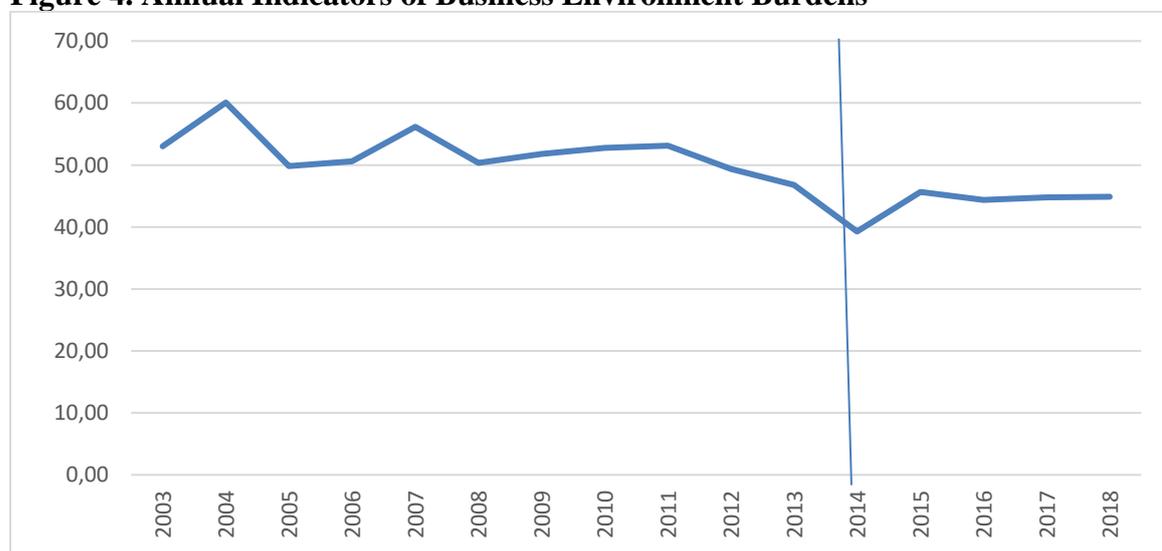
Figure 3. Annual Indicators of Business Environment Burdens in the star chart
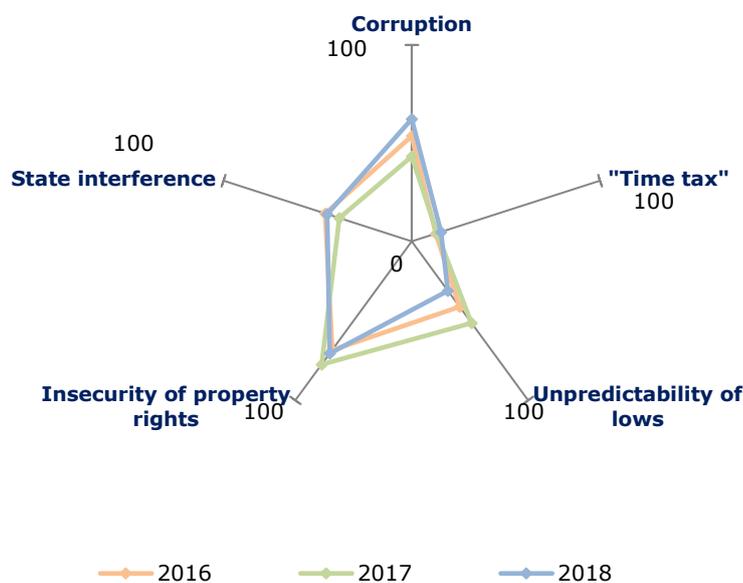
Source: IER BTS

Analyzing 15 year's trends, we can see the decrease the level of regulatory burdens. See figure 4. In the next studies, we are going to look for the real statistic data that can be correlate with this trend.

Figure 4. Annual Indicators of Business Environment Burdens
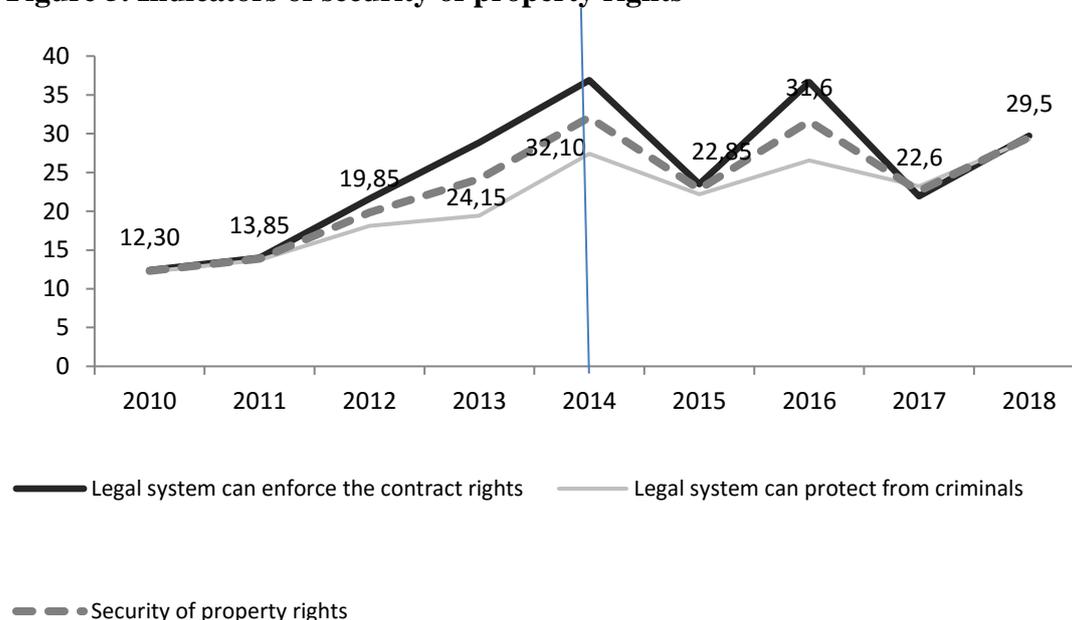

Source: IER BTS

In the chapters below, we analyze the fluctuation of components of the Annual Indicator of Business Environment Burdens during recent years.

2.3.1 Security of property rights

In 2018, entrepreneurs note improvement of the situation with the security of property rights: after the rapid fall of the indicator in 2017, in 2018 its value increased from 22.6% to 29.5%.

This concerns both the assessment of the ability of the legal system to ensure compliance with contractual rights and the ability of the legislative system to protect business from criminality. In 2018, 29.3% of managers believe that the legal system will provide protection against organized crime and 29.7% of managers believe that the legal system will ensure compliance with contractual rights. In 2017, the figures were 22.1% and 21.4%, respectively. The larger the size of the enterprise, the greater the share of managers believes that the legal system ensures compliance with contract rights. Similarly, the change in the indicator depends on the size of the enterprise. The share of respondents who believe that the legal system for enforcing contract rights among small businesses has doubled - from 13% in 2017 to 26% in 2018, for medium enterprises - from 22% to 29%, respectively. For large enterprises, the share increased by only 1.7 pp, from 36.4% to 38.1%. The value of providing a legal system for protection against crime virtually does not depend on the size of the enterprise. Among small businesses, 28% of managers believe that the legal system will provide protection against organized crime, among medium and large - 31% and 29% respectively.

Figure 5. Indicators of security of property rights

Source: IER BTS

2.3.2. Regulatory burdens

Direct state interference in the operational activities of enterprises. The level of state intervention in entrepreneurial activity is considered by respondents to be high. In 2016, this indicator reached a record high of 46%, dropped to 38.5% in 2017, and in 2018, it rose again to almost 2016 and was 45%.

Predictability and clarity of regulatory acts. Assessment of predictability and clarity of legislation has improved. The share of respondents who consider legislation to be contradictory and unpredictable has decreased from 51.3% in 2017 to 31% in 2018. The share of respondents who consider the legislation to be contradictory and unpredictable among small enterprises has decreased the most, the smallest decrease for large enterprises. For small businesses, the value dropped from 48.4% in 2017 to 24.7% in 2018, for large from 54.5% to 39.6%, respectively. For medium-sized enterprises, the value dropped from 53.8% in 2018 to 32.8% in 2018.

"Time Tax". It is estimated that in 2018, managers spend 15.6% of their working time on interacting with government officials on the interpretation and application of laws. The value of

this indicator increases for 4 years in a row, in 2015 the value was 11.4%, in 2018 it increased to 15.6%. For comparison, the minimum time spent on communication with government officials was recorded in 2010 - the time tax on average was 9.4% of the time, and the maximum - in 2011 and was 19.9%. The larger the size of the enterprise, the more time managers spend on interacting with government officials on the interpretation and application of laws.

As results, the Annual Indicator of Regulatory Burdens has decreased from 34.4% in 2017 to 30.5% in 2018. In 2018, the reduction of the regulatory burden is characteristic for enterprises of all sizes. For small, medium and large enterprises, the indicator has decreased, compared with 2017, by 3.9, 4.2 and 3.7 percentage points in accordance.

Figure 6. The Annual Indicator of Regulatory Burdens
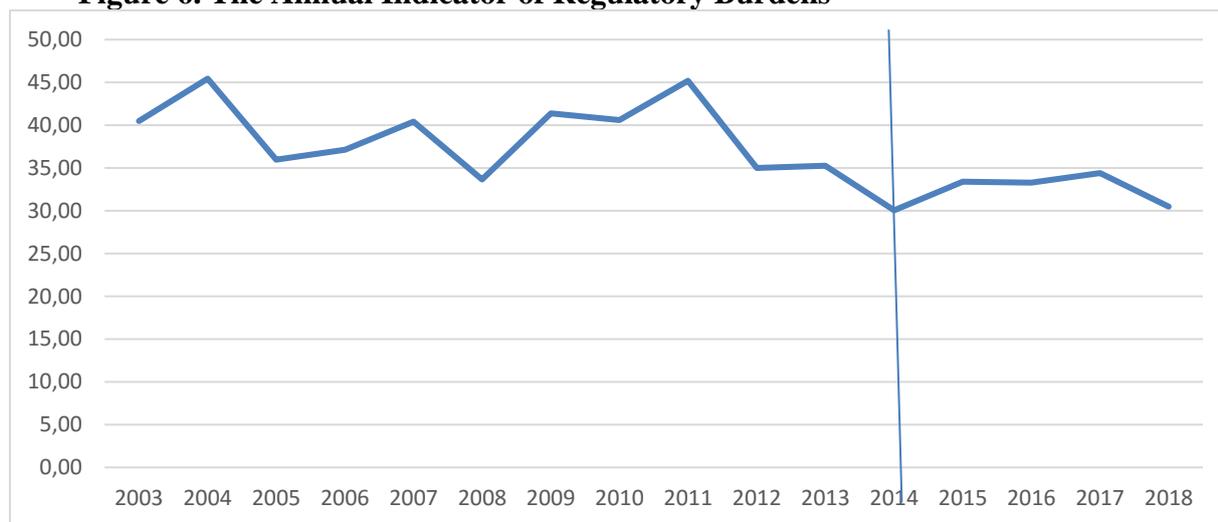
Source: IER BTS

2.3.4 Indicators of corruption

Absolute level of corruption. The level of corruption in Ukraine remains high. Respondents were asked whether unofficial payments were payable to companies such as them to deal with problem situations. In 2018, the share of managers who replied that for such enterprises as them, the payment of unofficial payments has become widespread to 78.5% (in 2017, 59.3%). This value is the highest for all years of research. A similar high value was in 2004 (76.8%). Most often, corruption is faced by small businesses - 85%. For medium and large enterprises, the level of corruption is 71.9% and 72.4% respectively.

Uncertainty about the consequences of a corrupt act. (Impossibility of payers of unofficial payments to provide the desired results). The share of respondents who are uncertain or after payment of an unofficial payment will be provided with the necessary "service", as was stipulated before, decreased in 2018 compared to last year - from 59% to 52.3%. The most unpredictable consequences of corruption acts for the third year are for medium-sized enterprises (63.9%), for small and large indicators it is 46.2% and 51.7% respectively.

Unpredictability and instability of unofficial payments. In 2018, the size and the situation in which unofficial payments are unpredictable for more than half of the enterprises. The unpredictability rate of unofficial payments remained almost unchanged at 57.8% (59.8% in 2017). However, for small and medium enterprises, the value of this indicator has changed. For small businesses, the value increased from 46.9% in 2017 to 52.3% in 2018, while for average it decreased from 85.7% to 60%, respectively. Value for large enterprises increased by 1.2 percentage points. and accounted for 67.9%.

Informal relationships (implicit corruption). In 2018, compared with 2017, entrepreneurs estimate the importance of informal ties with state authorities much higher. Thus, 46% of managers consider the presence of informal connections as an important factor in the success of their economic activity, while in 2017 their share amounted to 27.2%. This year, entrepreneurs rated the importance of informal ties for the last five years, the lowest in 2014 and 24.8%. The greatest increase in the importance of "friendly relations" with state authorities is characteristic for small enterprises (24 pp), and the smallest for large enterprises (10.5 pp). For medium-sized enterprises, the importance of informal ties increased by 17 percentage points.

The general picture of corruption is presented in a star chart, where the axes reflect the following indicators:

•% of companies that recognize the payment of unofficial payments;

•% of enterprises unsure of the consequences of a corrupt act;

•% of enterprises considering the size of unofficial payments unstable;

•% of companies that recognize the importance of informal links with at least one public authority.

The star chart in the Figure 7 as well as fluctuation of Index presented in the Figure 1 shows a worsening of the situation with corruption in 2018 compared to the previous year for the sample as a whole. In 2018, the absolute level of corruption increases and the importance of informal contacts with government officials for successful business, the size and situation of informal payments are almost unchanged, and the results of corruption are becoming more predictable.

Figure 7. Annual Indicator of the Institutionalization of Corruption presented as star chart
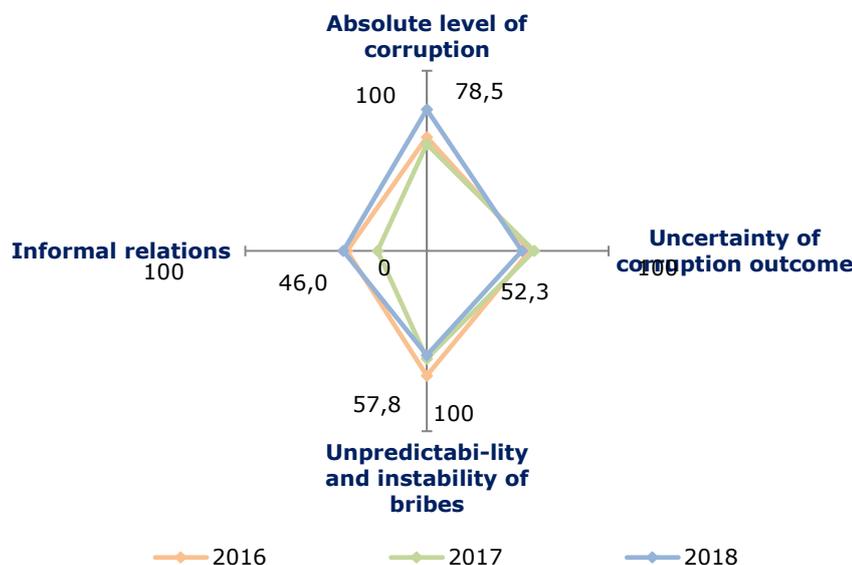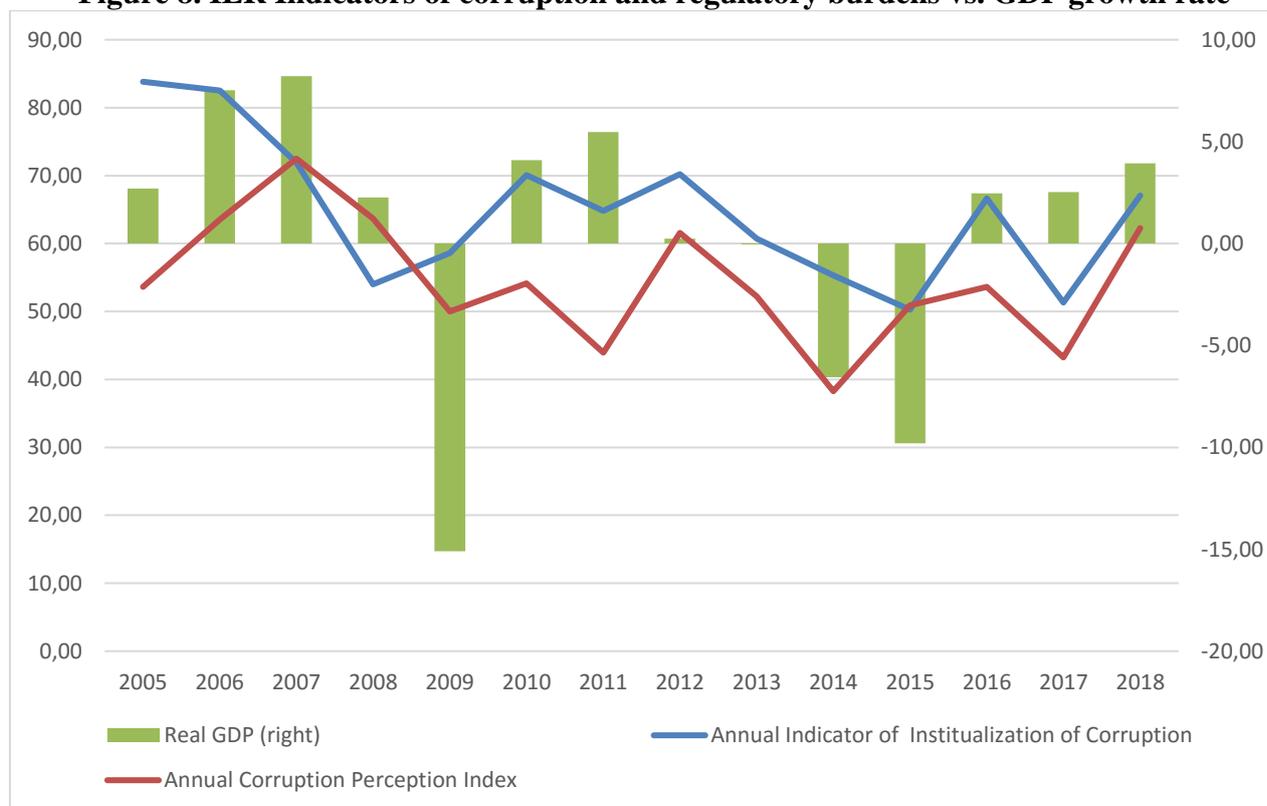

Source: IER BTS

2.5. Relation between indicators of corruption/regulatory environment and BTS indicators

At the stage of designing the research, we have expected to find the relations between the corruption indicators and other indicators. Annual indicators of regulatory climate and corruption were compared with quarterly indicators of the economic situation (IER Industrial Confidence Indicator and IER Index of Business Condition). Taken into account that the annual figures were collected during the first quarter (April / May) wave of the survey, the quarterly indexes for the

relevant period were taken into account. At this stage of our research, no statistically significant relations are recorded. The coefficient of correlation is low than 0.2. Therefore, we will continue to work at this issue.

At the same time, the simplest correlation analysis (Pearson correlation) shows the moderate level of correlation between year over year GDP growth rate and Annual Indicator of the Institutionalization of Corruption (details see in the Annex 4. The coefficient of correlation is -0.57. This result is significant at the 0.05 level (2-tailed). At the first glance, this correlation can be spurious. Nevertheless, it push to think. If we assume that corruption is a reaction on improper regulation, and entrepreneurs optimize their costs (behavior) in order to get the best result with less resources. In this case, this correlation can mean that, indeed, corruption has a certain institutional role, better than a regulatory system. In addition, the result shows that the root of the problem of corruption is still a disadvantageous regulatory environment.

Figure 8. IER Indicators of corruption and regulatory burdens vs. GDP growth rate

Source: IER BTS

If we go beyond the goals of this work, then the question is raised and what is generally corruption in the understanding of business representatives. Moreover, here we will note that corruption is a movement from both sides. On the one hand, an official may demand a bribe, on the other hand, often the business is ready to pay extra in order to accelerate one or another process. This can be adjusted by directing funds not into the bribe, but the state (local) budget, through the creation of a corresponding "legitimate" service. This has already been used in the implementation of Ukrainian reforms. In particular, it was about administrative services for citizens. All services can be obtained by paying a state fee, but if someone wants to get the service faster, then there is an appropriate procedure for additional funds. When it comes to reducing opportunities for corruption in the economy, we usually talk about reducing the role of an official through the digitization of services. However, it can be said that the "speed service" will have to pay and business.

From the point of view of political recommendations, there is no alternative to deregulation on the one hand and the establishment of a system of proper regulation in Ukraine. Given that this is an important part of the Association Agreement between Ukraine and the EU, the same implementation of the Agreement in the areas of creating a favorable regulatory environment - one of the important measures to reduce corruption.

3. Conclusion

1. IER has developed a system of indicators that tracking business attitudes towards corruption and some aspects of regulatory climate. There are quarterly and annual indicators. They collected in frame of conducting business tendency survey.
2. Developed IER indicators measure business attitudes to various aspects of the regulatory environment, including corruption. In the future, it is necessary to conduct research to compare the indicators of the business climate and corruption with the indicators of real economic statistics. Although we are aware that such indicators may not be found.
3. The result of analysis presented in this article support the thesis that corruption is reaction on overloaded and unclear regulation. While the more quantitative studies are demanded.
4. The result of the studies have policy implications and can be used as additional argument in developing policy recommendation and monitoring reforms implementation in Ukraine.

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M. Bédard, Less regulation and more competition to curb corruption, MEI May 2016,
https://www.iedm.org/sites/default/files/pub_files/lepoint0816_en.pdf

Annex 1. Questionnaire of BTS. Section «Corruption»
Annually asked questions (Survey wave of April)

1. In your opinion, what percentage of total annual sales do firm like yours pay in the form of unofficial payments to public officials? _____% on average

To what extent do you agree with the following statements? (scale: 1 - completely disagree, 5 - completely agree, 6 - do not know):

2. The level of unofficial payments and the situation in which they are paid are stable and predictable	❑ 1 ❑ 2 ❑ 3 ❑ 4 ❑ 5 ❑6
3. Interpretation of law and regulations that affect your business do not contradict each other and are predictable	❑ 1 ❑ 2 ❑ 3 ❑ 4 ❑ 5 ❑6
4. There is a need from time to time in "unofficial payments or services" in order to conduct business properly for the enterprises of your industry	❑ 1 ❑ 2 ❑ 3 ❑ 4 ❑ 5 ❑6
5. I am sure that the services for which I pay informally will be executed in accordance with the agreement	❑ 1 ❑ 2 ❑ 3 ❑ 4 ❑ 5 ❑6
6. If the actions of a civil servant do not meet the established rules, you can apply to a senior official to correct the situation without using unofficial payments	❑ 1 ❑ 2 ❑ 3 ❑ 4 ❑ 5 ❑6

7. It is believed that companies in Ukraine are forced to evade tax payments. In your opinion, what percentage of the official tax is paid by enterprises involved in the same area of commercial activity as yours?

<10%	11-20%	21-30%	31-40%	41-50%	51-60%	61-70%	71-80%	81-90%	>90%	Don`t know
❑ 1	❑ 2	❑ 3	❑ 4	❑ 5	❑ 6	❑ 7	❑ 8	❑ 9	❑ 10	❑ 11

8. When it comes to public procurement, in your opinion, what percentage of the contract value of an enterprise in your industry (such as yours) are willing to offer in the form of an unofficial payment to guarantee the receipt of a contract?

0%	<5%	6-10%	11-15%	16-20%	>20%	Don`t know
❑ 1	❑ 2	❑ 3	❑ 4	❑ 5	❑ 6	*(❑ 70

9. In your opinion, how is it important to have informal relationships with representatives of different levels of government for doing business in the same volume as yours? *(1 - not important, 5 - very important, 6 - I do not know)*

10. How do you think, to what extent the change in the management of various levels of government influence the process of doing business in your enterprise? *(1 - not important, 5 - very important, 6 - I do not know)*

9. *Informal relationship in......*							**10.** *Government influence*					
❑1	❑2	❑3	❑4	❑5	❑6	Regional authorities	❑1	❑2	❑3	❑4	❑5	❑6
❑1	❑2	❑3	❑4	❑5	❑6	Central government	❑1	❑2	❑3	❑4	❑5	❑6
❑1	❑2	❑3	❑4	❑5	❑6	Local government	❑1	❑2	❑3	❑4	❑5	❑6
❑1	❑2	❑3	❑4	❑5	❑6	Police	❑1	❑2	❑3	❑4	❑5	❑6
❑1	❑2	❑3	❑4	❑5	❑6	Tax authorities	❑1	❑2	❑3	❑4	❑5	❑6

Quarterly asked questions

12. Are there factors limiting the growth of your business? IF yes, choose no more than the most important factors of the following.
READ OUT, MULTIPLE CHOICE (NO MORE THAN 4)

1.	Shortage of energy	High regulatory burden (unclear legislation, bureaucracy, inspections)	9.
2.	Lack of qualified workers	High tax rates	10.
3.	Lack of orders/sales volume/ insufficient demand for products/services	Outdated technology	11.
4.	Lack of raw materials	High interest rates	12.
5.	Liquidity problems	Frequently changes of economic legislation	13.
6.	Unstable political situation	High competitive pressure	14.
7.	Lack of capacities	Corruption	15.
8.	Low availability of loans (access to credits, complex loan requirements and procedures)	Other_____ _____	16.

Annex 2. The Indicator of the Institutionalization of Corruption

Absolute level of corruption

% of enterprises that accept
the payment of unofficial payments

% of enterprises that consider
the importance of informal links
with at leat one public authority

Informal relationships

Uncertainty of results

% of enterprises unsure of the
consequences of a corrupt act

% of enterprises considering the size
of unofficial payments unstable

Uncertainty about the size of the bribe
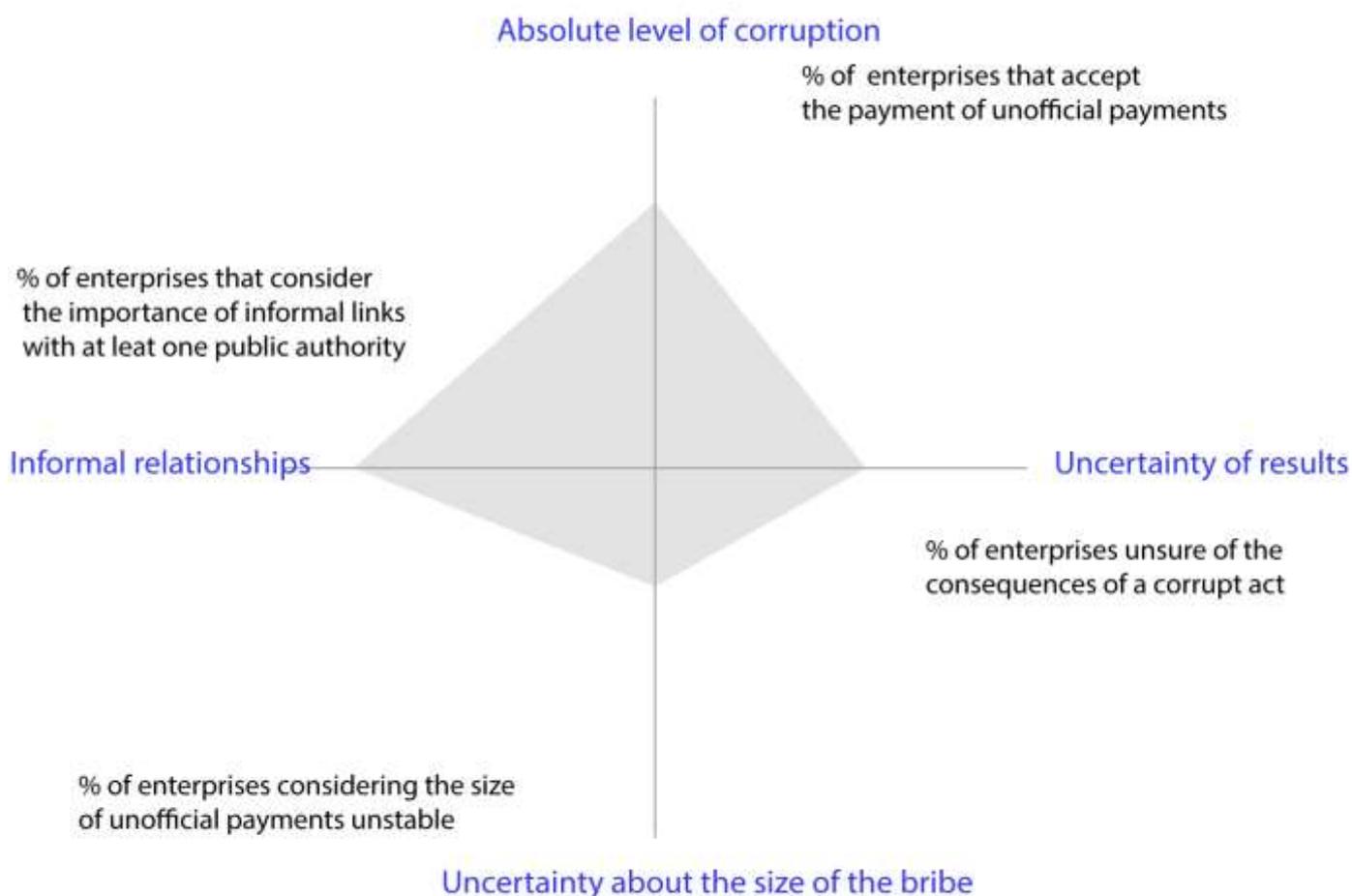
Factor Analysis (Principal component)

Correlation Matrix

		Absolute level	Uncertainty of corruption outcome	Unpredictability of bribes size	Unformal relations
Correlation	Absolute level	1.000	-.581	-.834	.079
	Uncertainty of corruption outcome	-.581	1.000	.427	-.255
	Unpredictability of bribes size	-.834	.427	1.000	-.338
	Unformal relations	.079	-.255	-.338	1.000

Communalities

	Initial	Extraction
Absolute level	1.000	.810
Uncertainty of corruption outcome	1.000	.562
Unpredictability of bribes size	1.000	.804
Unformal relations	1.000	.175

Extraction Method: Principal Component Analysis.

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.352	58.794	58.794	2.352	58.794	58.794
2	.945	23.629	82.424			
3	.608	15.210	97.633			
4	.095	2.367	100.000			

Extraction Method: Principal Component Analysis.

Component Matrix[a]

	Component 1
Absolute level	-.900
Uncertainty of corruption outcome	.750
Unpredictability of bribes size	.897
Unformal relations	-.418

Extraction Method: Principal Component Analysis.
a. 1 components extracted.

Annex 3. The Annual Indicator of Regulatory Burdens

Factor Analysis (Principal component)

```
FACTOR
  /VARIABLES VAR00001 VAR00002 VAR00003
  /MISSING LISTWISE
  /ANALYSIS VAR00001 VAR00002 VAR00003
  /PRINT INITIAL CORRELATION EXTRACTION ROTATION
  /CRITERIA MINEIGEN(1) ITERATE(25)
  /EXTRACTION PC
  /CRITERIA ITERATE(25)
  /ROTATION VARIMAX
 /METHOD=CORRELATION.
```

Correlation Matrix

		"Time tax"	Unpredictability of legislation	State interference
Correlation	"Time tax"	1.000	-.224	.426
	Unpredictability of legislation	-.224	1.000	-.740
	State interference	.426	-.740	1.000

Communalities

	Initial	Extraction
"Time tax"	1.000	.372
Unpredictability of legislation	1.000	.731
State interference	1.000	.860

Extraction Method: Principal Component Analysis.

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	1.963	65.436	65.436	1.963	65.436	65.436
2	.810	26.985	92.421			
3	.227	7.579	100.000			

Extraction Method: Principal Component Analysis.

Component Matrix[a]

	Component
	1
"Time tax"	.610
Unpredictability of legislation	-.855
State interference	.927

Extraction Method: Principal Component Analysis.

a. 1 components extracted.

Annex 4 Correlation between selected indicators and GDP growth yoy

Correlations

		Absolute level	Uncertainty of corruption outcome	Unpredictability of bribes size	Unformal relations	Instи́tualization of corruption	Annual Corruption Pr Index	GDP% yoy
Absolute level	Pearson Correlation	1	-.507	-.814**	-.089	-.322	.519	.136
	Sig. (2-tailed)		.064	.000	.761	.262	.057	.642
	N	14	14	14	14	14	14	14
Uncertainty of corruption outcome	Pearson Correlation	-.507	1	.242	-.015	.551*	-.314	.329
	Sig. (2-tailed)	.064		.405	.960	.041	.273	.251
	N	14	14	14	14	14	14	14
Unpredictability of bribes size	Pearson Correlation	-.814**	.242	1	-.155	.105	-.617*	-.322
	Sig. (2-tailed)	.000	.405		.596	.721	.019	.262
	N	14	14	14	14	14	14	14
Unformal relations	Pearson Correlation	-.089	-.015	-.155	1	.784**	.805**	.462
	Sig. (2-tailed)	.761	.960	.596		.001	.001	.097
	N	14	14	14	14	14	14	14
Institualization of corruption	Pearson Correlation	-.322	.551*	.105	.784**	1	.482	.570*
	Sig. (2-tailed)	.262	.041	.721	.001		.081	.033
	N	14	14	14	14	14	14	14
Annual Corruption Perception Index	Pearson Correlation	.519	-.314	-.617*	.805**	.482	1	.477
	Sig. (2-tailed)	.057	.273	.019	.001	.081		.085
	N	14	14	14	14	14	14	14
GDP% yoy	Pearson Correlation	.136	.329	-.322	.462	.570*	.477	1
	Sig. (2-tailed)	.642	.251	.262	.097	.033	.085	
	N	14	14	14	14	14	14	14

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).

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