DETAILED METHODOLOGY
OF MUNICIPAL COMPETITIVENESS
INDEX (MCI) 2019-2020
DATA COLLECTION
AND PROCESSING

KYIV 2020

Detailed Methodology of Municipal Competitiveness Index (MCI) 2019-2020 Data Collection and Processing

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Abbreviations

MCI   — Municipal Competitiveness Index
SME   — Small and medium enterprises

Introduction

Background

The Detailed Methodology of Municipal Competitiveness Index (MCI) data collection and processing is based on the Asia Foundation methodology of compiling economic governance index which was first pioneered in Vietnam in 2005. Later the methodology was replicated in Bangladesh, Indonesia, Cambodia, Kosovo, Malaysia, Mongolia, Myanmar, Salvador, Sri-Lanka and the Philippines, adjusted to the unique country context.

The Detailed Methodology is also based on the Concept of "Design Proposal, Implementation, and Methodology of Ukraine Municipal Competitiveness Index " which was elaborated with the support of Natasha de Roos, international consultant, and considers Ukrainian local context. The mentioned Concept paper lists the proposed sub-indices and relevant indicators, potential data sources, the general methodology of survey and data processing. This Detailed Methodology identifies survey tools, data sources, the list of indicators to evaluate competitiveness of Ukrainian municipalities and contains the tools for questionnaire, initial data collection and processing to ensure most accurate, reliable, and relevant survey results.

Thus, MCI is an analytical tool to evaluate efficiency of economic governance in municipalities. Its main objective is providing motivation for local authorities for economic growth, and identification of regulatory barriers, corruption and opacity to be eliminated for better efficiency of private business. In addition, MCI can serve as a means of encouraging competition among municipalities in establishing favorable business climate.

The main **goals of MCI application**:
- o   Measuring economic governance efficiency at the national and sub-national levels;
- o   Evaluation of local business climate perception by entrepreneurs;
- o   Municipal ranking formation (based on the measurement of economic governance efficiency and local business climate evaluation);
- o   Monitoring the progress of individual municipalities over time.

MCI results can be used by:
- o   *municipalities:* MCI allows to identify the best practices, compare the business climate between municipalities, identify weaknesses and room for improvement;
- o   *the national government:* MCI may serve as a tool to establish a dialogue between municipalities and the government in order to improve the business climate and identify the ways to harmonize regulations at the national level;
- o   *business:* MCI presents the vision of the private sector of the entrepreneurship development policy and the interventions required to improve local business climate;
- o   *foreign investors:* can use MCI to decide upon investment placement;
- o   *international donors:* can use MCI to identify the goals and objectives of the new projects and for project impact monitoring.

Survey design

MCI is an aggregated indicator comprised of 10 governance components (sub-indices) to assess municipal competitiveness. These 10 components include:
1. Starting a business
2. Access to public (municipal) property
3. Transparency and data openness
4. Compliance cost
5. Taxes and duties
6. Informal payments and corruption
7. Security of operating a business
8. Leadership of municipal authorities
9. Development resources
10. Support of innovations

Each sub-index is based upon one or more indicators. The following sub-indices contain more than one indicator:

Component 6. Informal Payments and Corruption contains 2 dimensions:
Indicator 1. Bribes /gifts
Indicator 2. Anticorruption efforts

Component 8. Leadership of Municipal Authorities contains 2 dimensions:
Indicator 1. Business development support
Indicator 2. Public-private dialogue

Component 9. Development Resources contains 2 dimensions:
Indicator 1. Human resources
Indicator 2. Financial resources and infrastructure
Indicator 3. Business support infrastructure

Data collection

Two data collection techniques are applied in MCI development:

1) **Computer assisted telephone interviews with business representatives** in Ukrainian municipalities[1]);
2) **Desk research** (collection and processing of statistical data, analysis of official web-sites of municipalities, documents, public information requests to the municipal authorities).

This Detailed Methodology contains Questionnaire for business managers / owners to be used for computer assisted telephone interviews. The questionnaire contains 84 questions, including:

o **Section A** – Introduction to the interview
o **Section B** (questions B1-B14) – General information about the interviewed businesses (location, type, form of incorporation, average number of employees, industry, gender of the owner/manager). The data collected with these questions, will allow to deeper analyze the differences between cities driven by these characteristics of companies. In addition, this will allow to identify any possible gender-related issues of running business specific to individual municipalities and industries. This block of questions also contains a question about three main local barriers of running a business. Answers to these questions will enable us to propose the solutions to municipalities to quickly eliminate such barriers, thus improving certain aspects of local business climate;
o **Section B (questions B15-B16)** – Questions whether the company intends to change (expand or reduce) its scale of operation. Questions B15-B16 are used to create new variable. The new variable will be used for regression analysis of the relative contribution of each MCI sub-index;
o **Section C –** Questions regarding Annual Business Climate Assessment. Section C is a part of ABCA survey[2] and it is not a part of MCI Index
o **Sections D-M** — Questions organized by MCI sub-indices and dimensions within the sub-indices.

Before conducting computer assisted telephone interviews, the team of interviewers will have orientation through the goal of the survey, data collection process, with detailed review of each question.

Data to be collected in the desk research, are described in detail in the "Operationalization of indicators" section of this Detailed Methodology. These data will be collected from statistic data sources or through analysis of documents and official municipal web-sites, public information requests to the city councils.

Sample

For computer assisted telephone interviews with business managers/owners, stratified random sampling is applied based on the Unified State Register of Legal Entities, Individual Entrepreneurs and Civil Organizations. Randomized stratified sampling includes the following steps:

1) Obtaining the general population of businesses registered in each municipality (data from the Universal register) (excluding public, governmental, communal enterprises, farms, retail cooperative societies and citizens' associations)
2) Stratification of population in each municipality by two characteristics: a) individual entrepreneur (sole proprietor) and legal entity based on the share of employees; б) state registration in 2018-2019 and state registration before 2018[3]
3) Identification of the total sample size for each municipality — not least than 200 interviews (to ensure the margin of error of more than ±7 percentage points with the confidence level of 0.95, excluding design effect)
4) Stratified random sampling with proper representation the structure of the general business population by business type (legal entity / sole proprietor) and the date of state registration

Computer assisted telephone interviews will be conducted with business representatives in the main random sample. Screening telephone calls will be placed to test the units of the main random sample for activity. In case any businesses

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[1] In 2019 – 24 oblast cities, including the administrative centers of Donetsk and Luhansk oblasts Kramatorsk and Sievierodonetsk, respectively. In 2021 – 45 largest by population cities of Ukraine; in 2023 – 60 largest by population cities of Ukraine.

[2] ABCA — Annual Business Climate Assessment — policy tool developed and implemented by the IER under USAID LEV Program in 2015-2017 — that aims at measuring the quality of the business environment for SME

[3] For MCI ranking in 2019. In 2021: state registration in 2019-2020 and state registration before 2019; in 2023: state registration in 2021-2022 and state registration before 2021.

included in the main random sample are inactive (or in case of a failure of the contact attempt), a replacement will be drawn. The main respondent will also be identified in the screening telephone calls, whether it is the business owner or the business manager, as recommended by the business owner. If a firm refuses to respond, this is separately noted, and another unit is randomly selected from the general population.

The data collected in the survey are verified in random telephone calls placed to at least 10% of the respondents, with the use of the same questionnaire.

Normalization of data

All indicators within the sub-indices are normalized using the following formula:
1) For the incentive indicators (higher score of the indicator denotes better governance):
[9*((Municipality score i – Sample minimum) / (Sample maximum – Sample minimum))+1]

2) For the disincentive indicators (higher score of the indicator denotes poorer governance):
11-[9*((Municipality score i – Sample minimum) / (Sample maximum – Sample minimum))+1]

Please refer to the "Operationalization of indicators" sections defining whether the indicator is an incentive or a disincentive, for proper selection of the normalization formula to be applied to each indicator.
Normalization converts the values of each indicator around the 10-point scale.

Data aggregation

Normalized values of the indicators within each sub-index are aggregated, and the sub-index value is computed as simple arithmetic mean. If in a sub-index or a sub-index dimension hard data (statistical data) are used along with soft (survey) data, the hard data are weighted 40%, and the soft data – 60% of the total dimension score. In such case, weighted arithmetic mean is used for data aggregation and the sub-index value computing. Such aggregated dimension value is further aggregated in the sub-index using simple arithmetic mean. The aggregated MCI is computed as the sum of 10 sub-index values.

The next step is weighing the sub-indices through regression analysis. In the initial methodology, a hypothesis was put forward about the relationship between long-term expectations and the values of 10 sub-indices, as well as the impact of the component (the phenomena they measure) on long-term business expectations on business activity. In turn, long-term impact assessment factors were to be the basis for the design of weights for each sub-index, depending on the "importance" for long-term expectations. However, correlation and regression analysis showed no significant correlations between sub-indices and expectations. As a result, it was decided to calculate the MCI value without calibration. At the same time, testing of calibration procedures will be continued in the next MCI round.

The calibration can be done by estimating the marginal impact of each MCI sub-index on business expansion plans in the next two years. The variable for this estimation will be driven from Question B17, a new variable based on Questions B15 and B16 in which the respondents are asked about their two-year plans. The type of business (legal entity/individual entrepreneur) and the industry will be used as control variables. Regression coefficients will be used to obtain the relevant weight for each sub-index. The relative weights should be rounded to the closest 5th in order to obtain the final weight of each sub-index in percentages. Where regression coefficient is negative (e.g., taxes, informal charges, corruption, etc.), the lowest rounded positive value is used.

Aggregated MCI score may vary between 1 and 100.[4]

MCI Ranking and grouping of municipalities

Upon obtaining of weighted MCI municipalities are ranked from high to low.
The next step is breaking down the municipalities into three classes based on their MCI score:
1) High MCI
2) Average MCI
3) Low MCI

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[4] In practice, aggregated MCI score varies between 10 and 100. However, minimum aggregated score can be 1 in case it is impossible to calculate 9 of 10 subindices.

In case of even distribution by MCI value, the municipalities will split into three even classes (from high MCI score to low). If aggregated MCI values very significantly, classes with even (or uneven) intervals will be appropriate. In case of grouping with even intervals, the class interval (i) will be defined using the formula:

$$i = (x_{max} - x_{min}) / n,$$

where: x_{max}, x_{min} – MCI maximum and minimum values, respectively, n – number of classes.

Grouping with even intervals is achieved through subsequent adding of the class interval to the lower boundary of each class. Thus, for the "low MCI" class the interval will fall within the x_{min} to x_{min}+i range, and similarly for every next interval. The interval for the last class will fall within x_{max}-i to x_{max} range.

If even interval grouping places no municipalities into the average group, uneven interval grouping is applied. Uneven intervals can increase progressively from the lowest MCI score. The class intervals are defined by expertise.

Another solution to distribute municipalities into classes by their MCI score is to include 25% of the municipalities with the highest MCI score in Class 1, 25% of the municipalities with the lowest MCI score in Class 3, while the other 50% of municipalities will fall into the average class. This type of grouping was selected for MCI 2019-2020.

Operationalization of indicators

Sub-index 1. Starting a Business

I. **Data source:** Businesses
Data collection method: Survey in the form of computer assisted telephone interview
Data collection tool: Questionnaire for business managers / owners.

Indicator	Time for state registration	Barriers during registration	Counselling during registration	Time for launching the business	Time to register changes in the Universal register
Question	D1. Remember how you went through the state registration process in 2018-2019. How many full days did it take, starting with the day of registration documents submission until the day of receiving the Extract from the Universal State Register? *[scale] ≥1* *If it is difficult to remember, ask for an estimate* _____(days) 98. Did not pass state registration in 2018-2019 99. (DO NOT READ OUT) Hard to say / refuse	D2. Did you face any problems / barriers during the process of business registration? Read out [single] 1. Yes 2. No 99. (DO NOT READ OUT) Hard to say / refuse	D3. When you were passing the state registration procedure in 2018-2019, did you have an opportunity to receive counselling or any other assistance in filling in / submission of documents for state registration? Read out [single] 1. Yes 2. No 99. (DO NOT READ OUT) Hard to say / refuse	D4. How many full days passed from the date of submitting the documents for business registration to the date of the first sale? [scale] ≥1 If it is difficult to remember, ask for an estimate _____(days) 99. (DO NOT READ OUT) Hard to say / refuse	D6. How many full days did the state registration of changes take? [scale] ≥1 If it is difficult to remember, ask for an estimate _____(days) 99. (DO NOT READ OUT) Hard to say / refuse
Data processing	Arithmetic mean of the number of days Base: those who indicated the number of days	% of "yes" responses Base: all responses	% of "yes" responses Base: all responses	Arithmetic mean of the number of days Base: those who indicated the number of days	Arithmetic mean of the number of days Base: those who indicated the number of days
Normalization	Disincentive	Disincentive	Incentive	Disincentive	Disincentive

Table continued

Indicator	Time for obtaining permits[5]						
Question	D7.　I will read the list of permits, and you will tell if you received such a document in 2018-2019. And if so, how many full days did you spend from the day the application was filed to the day you received it? If it is difficult to remember, ask for an estimate						
Sub-question	Permits and registrations in construction (if needed, explain: notification about the onset of preparatory and construction works, permission for construction, declaration about readiness for commissioning, certificate of commissioning of completed construction)_____(days) 98 Did not receive such permits 99 (DO NOT READ OUT) Hard to say / refuse	Location passport of the temporary facility designated for commercial, household, social, cultural or other purposes used for business activity[6] _____(days) 98 Did not receive such permits 99 (DO NOT READ OUT) Hard to say / refuse	Declaration of conformance of the business facilities to fire safety requirements _____(days) 98 Did not receive such permits 99 (DO NOT READ OUT) Hard to say / refuse	Approval for commercial sign placement _____(days) [7] 98 Did not receive such permits 99 (DO NOT READ OUT) Hard to say / refuse	Approval for outdoor advertisement placement (_____(days) [8] 98 Did not receive such permits 99 (DO NOT READ OUT) Hard to say / refuse	Resolution on state registration of market operator capacity _____(days) [9] 98 Did not receive such permits 99 (DO NOT READ OUT) Hard to say / refuse	Permission to disturb beautification objects and amenities _____(days) [10] 98 Did not receive such permits 99 (DO NOT READ OUT) Hard to say / refuse
Data processing in sub-questions	Arithmetic mean of the number of days Base: those who indicated the number of days	Arithmetic mean of the number of days Base: those who indicated the number of days	Arithmetic mean of the number of days Base: those who indicated the number of days	Arithmetic mean of the number of days Base: those who indicated the number of days	Arithmetic mean of the number of days Base: those who indicated the number of days	Arithmetic mean of the number of days Base: those who indicated the number of days	Arithmetic mean of the number of days Base: those who indicated the number of days
Data processing in questions	Weighted arithmetic mean of processed data in sub-questions (the weight is the percentage of respondents to the sub-questions)						
Normalization	Disincentive						

II. *Data source:* Statistical data

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[5] Only two out of seven subquestions were used for calculation of the indicator due to insufficient filling of the subsamples.

[6] The question was not included into calculations of MCI 2019-2020 due to insufficient filling of the subsample.

[7] The question was not included into calculations of MCI 2019-2020 due to insufficient filling of the subsample.

[8] The question was not included into calculations of MCI 2019-2020 due to insufficient filling of the subsample.

[9] The question was not included into calculations of MCI 2019-2020 due to insufficient filling of the subsample.

[10] The question was not included into calculations of MCI 2019-2020 due to insufficient filling of the subsample.

Data collection method: Desk research

Indicator	Number of public officers dealing with business registration per 10 000 registered businesses
Data source	*Number of public officers dealing with business registration (including public officers at state administrations (district administrations) and local governance bodies (city councils), public notaries):* Public information from the Ministry of Justice of Ukraine regarding the number of persons who have access to the State Register of Legal Entities, Individual Entrepreneurs and Public Organizations *Number of registered businesses:* Statistical data, Information about business activity, Table "Number of businesses in cities of oblast significance and rayons" (Regional Statistical Offices)
Formula	*Number of public officers dealing with business registration / Number of registered businesses * 10 000*
Normalization	Incentive

Sub-index 2. Access to public (municipal) property

I. *Data source:* Businesses
Data collection method: Survey in the form of computer assisted telephone interview
Data collection tool: Questionnaire for business managers / owners.

Indicator	Documents certifying ownership / land lease	Obtaining documents ownership / land lease	Accessibility of information about vacant land plots	Availability of information about municipal real estate
Question	E1.　　Do you (your company / you as an individual entrepreneur) have access to the documents of ownership / lease of the land plot where the business operates? Read out [single] 1. Yes 2. No 3. Does not apply 99. (DO NOT READ OUT) Hard to say / refuse	E3.　　How many full days passed before the documents were issued, from submitting the application (or any other document) to the day of receiving the confirming documents (signing land lease agreement / receiving extract from State Land Register)? [scale] ≥1 _____(days) 99. (DO NOT READ OUT) Hard to say / refuse	E4.　　. Is the information about communal land plots vacant for rent which can be used for construction or other purpose, available? *Read out* *[single]* *1. Yes* *2. No* *99. (DO NOT READ OUT) Hard to say / refuse*	E5.　　Is the information about municipal real estate (including non-residential facilities), which is leased or can be leased for business purposes, available in your city? Read out [single] 1. Yes 2. No 99. (DO NOT READ OUT) Hard to say / refuse
Data processing	% of "yes" responses Base: all responses	Arithmetic mean of the number of days Base: those who indicated the number of days	% of "yes" responses Base: all responses	% of "yes" responses Base: all responses
Normalization	Incentive	Disincentive	Incentive	Incentive

Sub-index 3. Transparency and data openness

I. *Data source:* Businesses
Data collection method: Survey in the form of computer assisted telephone interview
Data collection tool: Questionnaire for business managers / owners.

Indicator	Access to information about local budget	Access to information on local regulatory acts	Access to information on public procurements
Question	F1.1. Local budget infor-mation *Rate 1 to 5* 1 Poor 2 Acceptable 3 Average 4 Good 5 Excellent 99 (DO NOT READ OUT) Hard to say / refuse	F1.2 An opportunity to get ac-quainted with the content of local regulatory acts *Rate 1 to 5* 1 Poor 2 Acceptable 3 Average 4 Good 5 Excellent 99 (DO NOT READ OUT) Hard to say / refuse)	F1.3 Availability of public procure-ment information at the expense of local budgets and utilities *Rate 1 to 5* 1 Poor 2 Acceptable 3 Average 4 Good 5 Excellent 99 (DO NOT READ OUT) Hard to say / refuse
Data processing	% of "excellent" and "good" responses Base: all responses	% of "excellent" and "good" re-sponses Base: all responses	% of "excellent" and "good" re-sponses Base: all responses
Normalization	Incentive	Incentive	Incentive

Sub-index 4. Compliance cost

I. *Data source:* Businesses
Data collection method: Survey in the form of computer assisted telephone interview
Data collection tool: Questionnaire for business managers / owners.

Indicator	Time spent for compliance with local regulations	Costs of legal compliance	Number of inspections	Costs of inspection
Question	G1. How many days per year do you (your company / you as an individual entrepreneur) spend on compliance with local regulations governing your industry? [scale] 0-365 If it is difficult to remember the number of days, ask for an estimate. If nothing is spent, write down 0 (zero). _____(days) 99. (DO NOT READ OUT) Hard to say / refuse	G2. What is the percentage of the annual income of you (your company / you as an individual entrepreneur) spent on compliance with the requirements of local regulations? [scale] 0-100 Ask for an estimate. If nothing is spent, write down 0 (zero). _____(%) 99. (DO NOT READ OUT) Hard to say / refuse	G3. How many times a year are you visited by local authorities inspectors for inspecting your business (e.g., architecture and construction control, control of labor code compliance, beautification, public services, and amenities control, control of fulfilling liabilities of duties to the local budget, control of public toilets, parking lots and parking area operation, etc.)? [scale] ≥0 If it is difficult to remember the number of times, ask for an estimate. If the inspectors did not visit, write down 0 (zero) _____(number of times) 99. (DO NOT READ OUT) Hard to say / refuse	G4. How many days per year do you (your company / you as an individual entrepreneur) spend dealing with inspectors during the inspections referred to the previous question? [scale] 0-365 If it is difficult to remember the number of days, ask for an estimate. If nothing is spent, write down 0 (zero) _____(days) 99. (DO NOT READ OUT) Hard to say / refuse
Data processing	Arithmetic mean of the number of days Base: those who indicated the number of days	Arithmetic mean of the responses Base: those who indicated the percentage	Arithmetic mean of the number of cases Base: those who indicated number of times	Arithmetic mean of the number of days Base: those who indicated the number of days
Normalization	Disincentive	Disincentive	Disincentive	Disincentive

Sub-index 5. Taxes and duties

I. *Data source:* Businesses
Data collection method: Survey in the form of computer assisted telephone interview
Data collection tool: Questionnaire for business managers / owners.

Indicator	Costs of tax payment	Administrative burden imposed by tax regulations	Burden of local taxes and duties	Benefits from local taxes and duties payment
Question	H1. What percentage of your company's / your annual income is spent on taxes and duties (including Universal social fund contribution)? [scale] 0-100 Ask for an estimate in %. If nothing is spent, write down 0 (zero) _____(%) 99. (DO NOT READ OUT) Hard to say / refuse	H2. How many days do you (your company / you as an individual entrepreneur) spend to fulfill your taxation liabilities (including data collection and processing, fiscal accounting, filling in, submitting tax reports, tax payment) [scale] 0-365 If it is difficult to remember the number of days, ask for an estimate. If nothing is spent, write down 0 (zero). _____(days) 99. (DO NOT READ OUT) Hard to say / refuse	H3. Do local taxes and duties become an obstacle for your business? Read out [single] 1. Yes 2. No 99. (DO NOT READ OUT) Hard to say / refuse	H4. Did you (your company / you as an individual entrepreneur) receive benefits for paying local taxes and duties in 2018-2019? Read out [single] 1. Yes 2. No 99. (DO NOT READ OUT) Hard to say / refuse
Data processing	Arithmetic mean of the responses Base: those who indicated the percentage	Arithmetic mean of the number of days Base: those who indicated the number of days	% of "yes" responses Base: all responses	% of "yes" responses Base: all responses
Normalization	Disincentive	Disincentive	Disincentive	Incentive

Sub-index 6. Informal payments and corruption

Dimension 1. Bribes/gifts
I. ***Data source:*** Businesses
Data collection method: Survey in the form of computer assisted telephone interview
Data collection tool: Questionnaire for business managers / owners.

Indicator	Bribe solicitation	Offering bribes / gifts to municipal authority[11]	Cases of offering bribes / gifts to municipal authority[12]	Cost of offering bribes / gifts to municipal authority[13]
Question	M1. Have businesses (or you as an individual entrepreneur) experienced situations related to so-called "informal payments" during 2018-2019 when interacting with city government representatives on any business issues? Read out [single] 1. Yes 2. No 99. (DO NOT READ OUT) Hard to say / refuse	M2. Did your business experience this in 2018-2019… M2.1. You were asked for a bribe / gift in direct or indirect form, but you did not agree M2.2. You were asked for a bribe / gift in direct or indirect form, and you agreed M2.3. You offered a bribe / gift, either directly or indirectly, on your initiative 1. Yes 2. No 99. (DO NOT READ OUT) Hard to say / refuse	M3. How many times such situations have occurred during 2018-2019? [scale] ≥1 If it is difficult to remember the number of times, ask for an estimate _____(number of times) 99. (DO NOT READ OUT) Hard to say / refuse	M4. How much percent of your business's annual revenue did you spend on such " informal payments" during 2018-2019? [scale] 0-100 Ask for an estimate. If nothing was spent, write down 0 (zero) _____(%) 99. (DO NOT READ OUT) Hard to say / refuse
Data processing	% of "yes" responses Base: all responses	M2_Aggr. Experience of corruption cases in 2018-2019 [single] create the new variable from M2.1-M2.3: 1 "Reported the experience" — if M2.1 = 1 or M2.2 = 1 or M2.3 = 1. 2 "Haven't reported the experience " — else. % of "Reported the experience" responses Base: all responses	Arithmetic mean of the number of cases Base: those who indicated the number of times	Arithmetic mean of the responses Base: those who indicated the percentage

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[11] The indicator was not included into calculations of MCI 2019-2020 due to insufficient filling of the subsample.
[12] The indicator was not included into calculations of MCI 2019-2020 due to insufficient filling of the subsample.
[13] The indicator was not included into calculations of MCI 2019-2020 due to insufficient filling of the subsample.

Normaliza-tion	Disincentive	Disincentive	Disincentive	Disincentive

Dimension 2. Anticorruption efforts

I. ***Data source:*** Businesses

Data collection method: Survey in the form of computer assisted telephone interview

Data collection tool: Questionnaire for business managers / owners.

Indicator	Anticorruption efforts
Question	M5. Are you aware of local authorities implementing any special measures to prevent corruption (e.g., open budget system, digital municipal office, the system of corruption risk assessment and mitigation, municipal anti-corruption program / plan, etc.)? Read out [single] 1. Yes 2. No 99. (DO NOT READ OUT) Hard to say / refuse
Data processing	% of "yes" responses Base: all responses
Normalization	Incentive

Sub-index 7. Security of operating a business

I. *Data source:* Businesses
Data collection method: Survey in the form of computer assisted telephone interview
Data collection tool: Questionnaire for business managers / owners.

Indicator	Shadow economy	Losses due to crime	Amount of loss due to criminal actions	Raider attacks	Business security costs
Question	I1. In your opinion, do your competitors operate in the shadow? Read out [single] 1. Yes 2. No 99. (DO NOT READ OUT) Hard to say / refuse	I2. Has you (your company / you as an individual entrepreneur) experienced any losses due to extortion, theft, robbery, vandalism, arson 2018-2019? Read out [single] 1. Yes 2. No 99. (DO NOT READ OUT) Hard to say / refuse	I3. What percentage of your company's / yours annual income were the losses caused by such actions? [scale] 0-100 Ask for an estimate in %. If nothing was lost, write down 0 (zero) _____(%) 99. (DO NOT READ OUT) Hard to say / refuse	I4. Did your company experience a raider attack or management replacement as a result of the plotted business conflict in 2018-2019? Read out [single] 1. Yes 2. No 99. (DO NOT READ OUT) Hard to say / refuse	I5. What are the costs you incur to ensure security / protection for your business (security, equipment, court procedure, payment for protection racketeering), in % to your / your company's annual income [scale] 0-100 Ask for an estimate in %. If nothing is spent, write down 0 (zero) _____(%) 99. (DO NOT READ OUT) Hard to say / refuse
Data processing	% of "yes" responses Base: all responses	% of "yes" responses Base: all responses	Arithmetic mean of the responses Base: those who indicated the percentage	% of "yes" responses Base: all responses	Arithmetic mean of the responses Base: those who indicated the percentage
Normalization	Disincentive	Disincentive	Disincentive	Disincentive	Disincentive

Sub-index 8. Leadership of municipal authorities

Dimension 1. Business development support
I. **Data source:** Businesses
Data collection method: Survey in the form of computer assisted telephone interview
Data collection tool: Questionnaire for business managers / owners.

Indicator	Local government attitude towards private business	Support to business start-up	Support to development of existing businesses
Question	J1. In your opinion, what is the attitude of the local authorities to private business? *Rate 1 to 5* 1 Very bad 2 Bad 3 Average 4 Good 5 Very good 99 (DO NOT READ OUT) Hard to say / refuse	J2. Do you agree with the statement that the municipal government supports business start-ups? Read out [single] 1. Yes 2. No 99. (DO NOT READ OUT) Hard to say / refuse	J3. Do you agree with the statement that the municipal government supports the development of the existing businesses? Read out [single] 1. Yes 2. No 99. (DO NOT READ OUT) Hard to say / refuse
Data processing	% of "very good" and "good" responses Base: all responses	% of "yes" responses Base: all responses	% of "yes" responses Base: all responses
Normalization	Incentive	Incentive	Incentive

Source of data: Document, web-site review[14]
Data collection method: Desk research

#	Indicator	Data source	Criteria	Score
1	Updated monetary appraisal of land plots	Municipal council resolution approving the technical documents on normative monetary appraisal of lands in the community / Public information request to the city council	The year of normative monetary appraisal of lands in the community	2015 and later – 1 Before 2015 – 0
2	City boundaries established	Resolution on establishing and/or changing the city boundaries adopted by the Parliament of Ukraine / Public information request to the city council		Yes – 1 No – 0
3	Differentiated single tax rates	Local council resolutions /Local tax and duty rates /Taxes, duties and charges, State Tax Service of Ukraine (https://tax.gov.ua/podatki-ta-zbori/mistsevi-podatki/)	Differentiated single tax rates for Group 1 and 2 tax payers conducting certain business operation, listed in the resolution of municipal council	Yes – 1 No – 0
4	Designated corruption prevention department / officer	Official web-site of the municipal council / Public information request to the city council	Structural department / public official authorized to perform anticorruption efforts established within the organizational structure of local executive authorities	Yes – 1 No – 0

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[14] These indicators are not normalized. The sub-index value is calculated as the sum of the score which may be in the range from 0 to 10.

5	Availability of municipal policy to prevent corruption	Official web-site of the municipal council / Public information request to the city council	Available strategy, program, plan or road map to implement public anticorruption policy in the city	Yes – 1 No – 0
6	Availability of city anticorruption hot-line	Official web-site of the municipal council / Public information request to the city council	Information on direct local anti-corruption hot-line available on the official web-site of the municipal council	Yes – 1 No – 0
7	Publication of the resolution on local budget on the official web-site of the municipal council	Official web-site of the municipal council	Resolutions on local budget for 2017-2019.	Yes – 1 No – 0
8	Publication of the annual public procurement plan, attachment to the annual plan on the official web-site of the municipal council	Official web-site of the municipal council	Annual procurement plans for 2017-2019.	Yes – 1 No – 0
9	Specially designated advisory body within municipal council /office of the city mayor on business development	Official web-site of the municipal council / Public information request to the city council	Council of entrepreneurs, council of manufacturers and entrepreneurs, SME development board, etc.	Yes – 1 No – 0
10	Opportunity for private business to contribute comments, proposals and remarks at the official web-site of the municipal council	Official web-site of the municipal council	Contribute comments / remarks/ proposals	Yes – 1 No – 0

Dimension 2. Public-private dialogue

I. **Data source:** Businesses
Data collection method: Survey in the form of computer assisted telephone interview
Data collection tool: Questionnaire for business managers / owners.

Indicator	Participation of private business in elaboration of local documents	Conducting consultations with business
Question	J4. Evaluate the opportunity for business representatives to participate in the elaboration of local documents (strategies, programs, plans) *Rate 1 to 5* *1 No opportunities* *2 Limited opportunities* *3 Average opportunities* *4 Extensive opportunities* *5 Very extensive opportunities* *99 (DO NOT READ OUT) Hard to say / refuse*	J5. According to your observations, is private business consulted before adopting a new regulation or amending an existing one, which affects or may affect the business? *Rate 1 to 5* *1 Never* *2 Rarely* *3 Occasionally* *4 Often* *5 Always* *99 (DO NOT READ OUT) Hard to say / refuse*
Data processing	% of answers "extensive opportunities" and "very extensive opportunities" Base: all responses	% of answers "always" and "often" Base: all responses
Normalization	Incentive	Incentive

Sub-index 9. Development resources

Dimension 1. Human resources
I. ***Data source:*** Businesses
Data collection method: Survey in the form of computer assisted telephone interview
Data collection tool: Questionnaire for business managers / owners.

Indicator	Workforce quality	Quality of vocational education	Insufficient work-force training as a barrier for business operation	Lack of workforce as a barrier for business op-eration
Question	K1. How do you evaluate the quality of the workforce at the local labor market? *Rate 1 to 5* *1 Poor* *2 Acceptable* *3 Average* *4 Good* *5 Excellent* *99 (DO NOT READ OUT) Hard to say / re-fuse*	K2. How do you evaluate the quality of vocational education of workers at the local labor market? *Rate 1 to 5* *1 Poor* *2 Acceptable* *3 Average* *4 Good* *5 Excellent* *99 (DO NOT READ OUT) Hard to say / re-fuse*	K3. In your opinion, is the poor training of the local workforce a serious barrier for business operation in your city? Read out [single] 1. Yes 2. No 99. (DO NOT READ OUT) Hard to say / refuse	K4. In your opinion, is the lack of local work-force a serious barrier for business operation in your city? Read out [single] 1. Yes 2. No 99. (DO NOT READ OUT) Hard to say / refuse
Data pro-cessing	% of "excellent" and "good" responses Base: all responses	% of "excellent" and "good" responses Base: all responses	% of "yes" re-sponses Base: all responses	% of "yes" responses Base: all responses
Normaliza-tion	Incentive	Disincentive	Disincentive	Disincentive

II. ***Data source:*** Statistical data
Data collection method: Desk research

Indicator	% of working age population from total population (15-64 age)	Number of employees the firms need to fulfill the vacancies per 100 businesses
Source	Regional offices of The State Statistics Service of Ukraine	*Number of employees the firms need to fulfill the vacancies*: Ana-lytical and statistical information on the websites of the Regional offices of the State Employment Service of Ukraine *Number of registered businesses:* Statistical information, Busi-ness operation, table "Number of businesses in the cities of ob-last significance and rayons" (Regional Statistical Offices)
Data pro-cessing	-	*Number of employees the firms need to fulfill the vacancies /* *Number of registered businesses * 100*
Normaliza-tion	Incentive	Disincentive

Dimension 2. Financial and infrastructure resources
I. ***Data source:*** Businesses
Data collection method: Survey in the form of computer assisted telephone interview
Data collection tool: Questionnaire for business managers / owners.

Indicator	Financial support from local budget	Lack of financial resources as a barrier for business operation
Question	K5. Did you (your company / you as an individual entrepreneur) receive financial support for business operation from local authorities in 2018 -2019 (subsidized loans, compensation of loan interest, etc.)? Read out [single] 1. Yes 2. No 99. (DO NOT READ OUT) Hard to say / refuse	K6. In your opinion, is the lack of financial resources a serious barrier for business operation in your city? Read out [single] 1. Yes 2. No 99. (DO NOT READ OUT) Hard to say / refuse
Data processing	% of "yes" responses Base: all responses	% of "yes" responses Base: all responses
Normalization	Incentive	Disincentive

Indicator	Complexity of the connection to the electric grid/water-supply/sewage/heating[15]				
Question	K8. Remember, how many full days did it take from the date of applying until the date of the actual connection? If it is difficult to remember the number of days, ask for an estimate				
Sub-question	K8.1 To electric grid Number of days [scale] ≥1 _____(days) 98 Didn't connect 99(DO NOT READ OUT) Hard to say / refuse	K8.2 To gas supply system[16] Number of days [scale] ≥1 _____(days) 98 Didn't connect 99(DO NOT READ OUT) Hard to say / refuse	K8.3 To centralized potable water supply[17] Number of days [scale] ≥1 _____(days) 98 Didn't connect 99(DO NOT READ OUT) Hard to say / refuse	K8.4 To sewage system[18] Number of days [scale] ≥1 _____(days) 98 Didn't connect 99(DO NOT READ OUT) Hard to say / refuse	K8.5 To centralized heating network[19] Number of days [scale] ≥1 _____(days) 98 Didn't connect 99(DO NOT READ OUT) Hard to say / refuse
Sub-question response processing	Arithmetic mean of the number of days Base: those who indicated the number of days	Arithmetic mean of the number of days Base: those who indicated the number of days	Arithmetic mean of the number of days Base: those who indicated the number of days	Arithmetic mean of the number of days Base: those who indicated the number of days	Arithmetic mean of the number of days Base: those who indicated the number of days

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[15] Only one out of five sub-questions was used for calculation of the indicator due to insufficient filling of the subsamples.
[16] The question was not included into calculations of MCI 2019-2020 due to insufficient filling of the subsample.
[17] The question was not included into calculations of MCI 2019-2020 due to insufficient filling of the subsample.
[18] The question was not included into calculations of MCI 2019-2020 due to insufficient filling of the subsample.
[19] The question was not included into calculations of MCI 2019-2020 due to insufficient filling of the subsample.

Question re-sponse pro-cessing	Weighted arithmetic mean of the processed sub-question responses (where weight is assigned by the percentage of the responses to the sub-questions)
Normalization	Disincentive

II. *Data source:* Statistical data
Data collection method: Desk research

Indicator	Local budget expenditures for business support per 10 000 businesses
Question	*Local budget expenditures for business support (thousand UAH):* Official web-site of the municipal council / Public information request to the city council *Number of registered businesses:* Statistical information, Business operation, table "Number of businesses in the cities of oblast significance and rayons" (Regional Statistical Offices)
Data processing	*Local budget expenditures for business support / Number of registered businesses * 10 000*
Normalization	Incentive

Dimension 3. Business support infrastructure
I. **Data source:** Businesses
Data collection method: Survey in the form of computer assisted telephone interview
Data collection tool: Questionnaire for business managers / owners.

Indicator	Accessibility of business support services	Quality of business support services	Availability of business support infrastructure	Presence of business associations and business clubs in the city	Membership in business associations
Question	K9. Did you (your company / you as an individual entrepreneur) use any business support services (informational, advisory, training, etc.) offered by the municipal authorities in 2018 – 2019? Read out [single] 1. Yes 2. No 99. (DO NOT READ OUT) Hard to say / refuse	K10. How do you rate the quality of the services you received? *Rate 1 to 5* *1 Poor* *2 Acceptable* *3 Average* *4 Good* *5 Excellent* *99 (DO NOT READ OUT) Hard to say / refuse*	K11. Is there a business support center operating in your city (an institution, a department within the structure of the local authorities)? Read out [single] 1. Yes 2. No 99. (DO NOT READ OUT) Hard to say / refuse	K12. Are you aware of any business associations or clubs (or any other member associations for businesses) operating in your city? Read out [single] 1. Yes 2. No 99. (DO NOT READ OUT) Hard to say / refuse	K13. Are you (your company / you as an individual entrepreneur) a member of any business association? Read out [single] 1. Yes 2. No 99. (DO NOT READ OUT) Hard to say / refuse
Data processing	% of "yes" responses Base: all responses	% of "excellent" and "good" responses Base: all responses	% of "yes" responses Base: all responses	% of "yes" responses Base: all responses	% of "yes" responses Base: all responses
Normalization	Incentive	Incentive	Incentive	Incentive	Incentive

II. **Data source:** Statistical data
Data collection method: Desk research

Indicator	Business support infrastructure units established with participation of the local authorities, per 10 000 businesses
Question	*Business support infrastructure units established with participation of the local authorities:* Public information request to the city council *Number of registered businesses:* Statistical information, Business operation, table "Number of businesses in the cities of oblast significance and rayons" (Regional Statistical Offices)
Data processing	Business support infrastructure units / Number of registered businesses * 10 000
Normalization	Incentive

Sub-index 10. Support of the innovations

I. ***Data source:*** Businesses
Data collection method: Survey in the form of computer assisted telephone interview
Data collection tool: Questionnaire for business managers / owners.

Indicator	Work of research institutions	Business innovative activities	Support of innovations by municipal authorities	Meeting technology transfer service needs	Participation in clusters
Question	L1. Did you (your company / you as an individual entrepreneur) work with any research institutions or technological companies for production purposes in 2018-2019? Read out [single] 1. Yes 2. No 99. (DO NOT READ OUT) Hard to say / refuse	L2. Have you (your company / you as an individual entrepreneur) introduced new technologies, solutions, or products to optimize production, service delivery, sales, or business management in 2018-2019? Read out [single] 1. Yes 2. No 99. (DO NOT READ OUT) Hard to say / refuse	L3. To what extent do you believe the municipal authorities support local innovation programs, allocating funding from the local budget? *Rate 1 to 5* *1 No support at all* *2 Limited support* *3 Adequate support* *4 Significant support* *5 Very significant support* *99 (DO NOT READ OUT) Hard to say / refuse*	L4. Are your business needs in technology transfer services met (transfer of patents for inventions, know-how, research and development, patent licensing, the expertise of inventions, etc.) *Rate 1 to 5* *1 Not met at all* *2 Almost not met* *3 Somewhat* *4 Met to a significant extent* *5 Fully met* *97. (DO NOT READ OUT) Do not understand the question / do not know what "technology transfer" is* *98. (DO NOT READ OUT) No need* *99. (DO NOT READ OUT) Hard to say / refuse*	Are you (your company / you as an individual entrepreneur) a member of a cluster created with the initiative or support of the city government (cluster - the geographical concentration of interconnected companies and institutions in a particular area)? Read out the scale [single] 1. Yes 2. No 97. (DO NOT READ OUT) Don't understand the questions / don't know what a "cluster" is 98. (DO NOT READ OUT) No need 99. (DO NOT READ OUT) Hard to say / refuse
Data processing	% of "yes" responses Base: all responses	% of "yes" responses Base: all responses	Average score – an arithmetic mean of all responses Base: 1-5 responses	% of responses "met to significant extent" and "fully met" Base: all respondes	% of "yes" responses Base: all responses
Normalization	Incentive	Incentive	Incentive	Incentive	Incentive