CULTURE & CORRUPTION ON BUSINESS: RECIPROCAL AWARENESS

COBRA RESEARCH

DETAILED RESEARCH PLAN

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1. Background and unresolved problems. Your own work which has led to the project

1.1. General aims of the project

The phenomenon of corruption has always been an exciting research challenge, as researching and understanding such a negatively perceived concept and exploring its connections is not an easy task because the preconceptions of research subjects – but even researchers' bias – can significantly distort data collection, analysis and all aspects of the research process. Despite these challenges, however, there is a growing interest in the topic, as the assessment of our economic performance, the investment environment and other areas of the economy also depends on the level of corruption in the country. The level of corruption can be characterized by several indicators and models, but individual behaviour and perception related to the prevailing phenomenon in a given country provides more insights at both the organizational and individual level.

The literature often distinguishes between the root causes of corruption in low-income countries and those in higher-income countries. Low wage levels and poor working conditions increase the chances of corruption, while in Western (higher income) societies, corruption is seen as the exception rather than the norm (Caiden, 2001).

The effects of corruption described by the traditional economic approach are not always easy to interpret. Among the different corruption definitions, however similarity can be found: the corruption is always identified as a kind of abuse with power or discrimination. Almost every book and article on corruption start with the scrutiny of its definition. According to one of the most commonly cited and used definitions, corruption is *"a behaviour of public officials which deviates from accepted norms in order to serve private ends."* (A. I. Heidenheimer, Lohnston, & Huntington, 2019) De Graaf (2007) draws attention to the fact that in his view the definition of corruption is a social construct: *corruption* is not always a matter of black and white, but instead what is being considered *corrupt* at a certain place at a certain time. This assertion is supported by the fact that the so-called *"accepted norms"* change from time to time. The definition of corruption is not always clear. At a given location and time, norms are not perceived by everyone in the same sense, manner. However, what always appears as a shared understanding that corruption is considered as a negative thing: it always occurs as a deviant behaviour. It is important to recognize that the perception of corruption is crucial in the judgment of this phenomenon. And this perception is highly influenced by economic, social, political and cultural factors. Although the relationship between the perception of corruption and corruption is obvious, the direction of this relationship does not necessarily reflect the pattern adopted by public belief. The perception of corruption is influenced by a number of factors, as is the judgment of the level of corruption. An important difference between the two concepts is that as long as the definition of corruption level is group-level, i.e. at least mezo level interpretation, corruption perception is much more individual, and

group-level projection of perception through an averaged, aggregated indicator is much more distorting as an indicator carrying relevant information. In a globalized economic world, there is a growing need for indicators and tools that can easily capture complex phenomena. Investigating the phenomenon of corruption has been challenged not only because of its complexity, but also because of the difference between understanding and perceiving corruption.

Corruption is a deviant behaviour (Takács, Csapodi, & Takács-György, 2011), which is combated in several areas. However, in order to be effective in tackling corruption, we need to understand the mechanism of action of how this complex social phenomenon works. As society is imbued with corruption both horizontally (within certain social levels) and vertically (between social levels), its identification also requires several perspectives. Governmental, non-governmental, and international organizations are fighting corruption with enormous force and have formulated policies to prevent bribery and unethical practices (Getz & Volkema, 2001).

Due to the complexity of the phenomenon of corruption, it also causes specifically measurable social, economic and moral damage (Clark, 2017; Hawthorne, 2015; Keller & Sik, 2009; Rohwer, 2009; Tóth & Hajdu, 2018). The measurement levels are diverse, and their comparability and interpretability are limited. Corruption approaches show a heterogeneous picture according to the causal chain of the corrupt act, the level of decision-making and the level of analysis of corruption. Most of the research methods are theoretical, empirical studies are less common. At the same time, it is well known that measuring corruption and determining the damage it causes is extremely difficult, as the phenomenon is mostly not on the surface, in front of the public and researchers. Nevertheless, there are many attempts to quantify the damage caused by corruption, and several internationally recognized organizations regularly publish such measurements and proxy indicators.

The aim of our research is not to create another corruption indicator. One of the cornerstones of the fight against corruption is to understand how it is composed at the individual level and what influences the sensitivity to corruption, how the individual perceives corruption and how much the individual has become ingrained in its daily life. It is only after the subsequent sensitization and attitude formation that the legal formalization of the struggle makes sense.

The aim of our research is therefore multifaceted. On the one hand, we want to explore individual perceptions and sensitivities about corruption and the path to corrupt behaviour, and on the other hand, to understand what social, economic and cultural factors influence them and how they affect different cultures and individuals with different cultural profiles. Thirdly, we would like to examine the impact of the gender of the participants in corrupt situations and actions on the perception of the given situation. So, one of our goals is to examine the question of whether we perceive corruption differently because of the gender of those involved in the act of corruption.

The research has several goals built on each other:

1. Develop measurement scales to examine perceptions of corruption
2. Identify the individual's cultural characteristics and determine if they affect his or her perception of corruption
3. Development of a special measurement instrument with which the above measurement scales can be used.

1.2. Background and social/academic relevance

Most corruption research suffers from a single common problem: there is no objective measure of corruption that would create comparability across countries (Gutmann, Padovano, & Voigt, 2020). Studies of the determinants or effects of corruption generally rely on indicators of perceptions of corruption. (World Bank's Control of Corruption Index – CCI, CPI, Global Integrity Index by Global Integrity)

The Transparency International's Corruption Perceptions Index (CPI) is one of the most commonly used indicators to measure and rank the level of corruption in countries. Despite its widespread use by researchers and policy makers, the CPI contains erroneous assumptions about equal importance and independence across multiple data sources. The big question is whether some data sources in the CPI

have the same effect on the perception of corruption and whether there are causal relationships between data sources (Budsaratragoon & Jitmaneeroj, 2020). The term corruption perception is often misleading because the majority of lay people associate it with individual perceptions, although due to the complexity of the indicator, it does not mean individual level perception, 13 indicators and data sets of 12 international institutions are used for the CPI calculation algorithm. Thus, due to the use of complex indicators, the CPI is an indicator of indicators. Most of the indicators measure the number and frequency of transactions trapped between formalized, standardized processes (indicators used to characterize the macro environment), while the indicator suggests behaviour and perception only indirectly without explicit measurement. A further challenge in interpretation is that, although the difference between the real level of corruption and its perception is clear, the boundary between reality and perception is often blurred when interpreting the results, despite careful attention. The CPI is generally perceived by the public as an estimated level of corruption rather than a perceived level of corruption (Søreide, 2006).

A common approach that we live with corruption and it is inevitable, an integral part of economic and social transactions (Sík, 2002), is included in customary law (Pozsgai Alvarez, 2015), so it is often considered accepted. In exploring the antecedents of corruption at the societal level, researchers agreed that different cultures and cultural traits significantly influence a wide range of social processes (Geert Hofstede, 1983; House, Hanges, Javidan, Dorfman, & Gupta, 2004). Studies on organizational behaviour also support the strong influence of values and culture on personal behaviour (Bhagat & Hofstede, 2002; House et al., 2004). Cultural dimensions can affect individuals' perceptions of ethical situations (Vitell, Nwachukwu, & Barnes, 2013); therefore, national cultural differences are also expected to affect corruption. Understanding the cultural dimensions that can affect the level of corruption can be critical for both corporate and national competitiveness (Davis & Ruhe, 2003; Serra, 2006) and for the success of international operations (Kogut & Singh, 1988; Park, 2003). Several previous studies have pointed out that national culture is an important factor in research on corruption, but studies involving different countries are relatively rare (Davis & Ruhe, 2003; Husted, 1999; Park, 2003).

Empirical evidence on the relationship between perceptions and experiences of corruption presents a rather mixed picture (Dimitrova-Grajzl, Grajzl, & Guse, 2012; Gutmann et al., 2020; Luminita Ionescu, 2013; Olken, 2009) and is highly dependent on the quality of underlying institutional context. However, empirical studies based on individual data have found a robust relationship between perception and experience (Gutmann et al., 2020). In contrast, our research links perception and action (expected behaviour). We hypothesize that the relationship between perception and action may show a closer causal relationship than the relationship between perception and experience.

In public opinion, we often find that women are less corrupt and that the proportion of female decision-makers is inversely correlated with the degree of corruption (Afridi, Iversen, & Sharan, 2017; Barnes & Beaulieu, 2019; Esarey & Schwindt-Bayer, 2019; Stensöta & Wängnerud, 2018). Studies that also examine the gender of respondents are widely known (Boehm & Sierra, 2015; Chen, 2017; Esarey & Chirillo, 2013; Jha & Sarangi, 2018). However, the proportion of female decision-makers in public administration or corporate management hardly has a direct impact on the level of corruption: although countries with lower levels of corruption (Fisman & Gatti, 2002; Gatti, 2004) tend to be more liberal and have better career prospects for women than in more hierarchical societies with masculine cultural traits, it is unclear whether lower levels of corruption are due to a more liberal system or to women being more sensitive leaders than their male counterparts (Boehm, 2015; Boehm & Sierra, 2015). This can be decided in such a way that it is necessary to examine whether people's perceptions change in a given situation because the gender of the actors is different. No one has investigated this before. This may be because the majority believe that corruption in itself should be punished and avoided, so it does not matter whether the perpetrators are corrupt men or women. However, as several studies point out that women are more sensitive to perceiving corruption than men (Agerberg, 2014; Gerasymenko, 2018), the question may rightly arise as to whether this is not due to the fact that those involved in corruption are essentially identified as men (Juhász & Sági, 2019).

1.3. Unresolved issues

It is clear from the literature that there are still many unanswered questions in corruption research.

- Corruption is usually measured from three approaches (Tóth & Hajdu, 2018): (1) perceptual surveys based on questionnaire interviews; (2) attitude surveys through questionnaire surveys; and (3) analyses based on objective indicators. There is no objective measurement instrument that specifically examines perception. One of the biggest challenges is that the relationship between subjective perception and the real situation is uncertain (Rose & Peiffer, 2012), and some social and economic phenomena can distort perception (Kurtz & Schrank, 2007). Our research expands the scope of all three measurement approaches, taking into account additional aspects – so, our approach is based on a mixed methodology. In the case of the different approaches, the question rightly arises how to define the measurement scale.
- Most corruption investigations examine corruption in the public and private sectors separately, but we examine these phenomena in a questionnaire through different situations, giving us an opportunity to understand whether an individual perceive them in the same way in the public and private sectors.
- The complexity of the relationship between the perception of corruption and corrupt actions also requires the examination of additional aspects such as ethical, moral barriers (Abraham et al., 2020; Abraham & Pane, 2014), the causal relationship of deviant behaviours to corrupt actions (Nordin, Takim, & Nawawi, 2013). In the case of the relationship between perceiving and experiencing corruption, the experience can distort perception. In the case of action and perception, this similar relationship works in such a way that perception influences action. Action, on the other hand, can become an experience for those involved in a particular situation, and in this way, through action, we can also influence their perception through the experience of others. Therefore, a deeper understanding of this nexus and its individual motivations require further investigation.
- One of the effects that distorts perceptions of corruption at the individual level is social and economic status. Higher social rank is identified by more power, which is an important aspect in judging corruption due to the embeddedness of corruption in customary law. That is, because of differences in social status, individuals' perceptions will also differ.
- In examining corruption, a number of studies (Ades & Di Tella, 1999; Adsera, Boix, & Payne, 2003; Brunetti & Weder, 2003; Persson, Tabellini, & Trebbi, 2003; Treisman, 2000) have collected the factors that influence the level of corruption, and among them almost without exception, culture can also be found as an important influencing factor. Most studies use the dimensions of Hofstede (1983), which is why they receive a lot of criticism. One of the most common criticisms of the model in corruption investigations is that, using the concept of the Dutch researcher, cultural values are considered stable and static, as well as applicable to today's ethical issues. Furthermore, the cultural values of the Hofstede model allow for group-level interpretation, so it is often questionable that it has been properly integrated into the questionnaire research. In our research, we also use individual-level, validated transformation of Hofstede questionnaire elements to understand different dimensions of culture when understanding individual perceptions and actions.
- Doubts about the validity of comparisons at the national level also arise where the interpretation of cultural elements used in addition to the assessment of individual-level perceptions, as they appear as a group-level construct, may also be distorted. By using a version of cultural questions that allows for individual-level data collection, international comparability is also simpler and clearer.
- Even among professionals, there is a widespread belief that women are less corrupt than men, as they believe that differences in risk aversion and mutual behaviour may partly explain gender differences in corrupt behaviour (Boehm, 2015). Contextual factors appear to be the main reasons for the observed differences in corrupt behaviour. Previously hypothesized gender differences may not be as universal as thought – culture has a greater impact: in terms of gender

differences in behaviour across countries, greater differences in women's anti-corruption behaviour are found than in men (Alatas, Cameron, Chaudhuri, Erkal, & Gangadharan, 2009). However, there is no doubt that gender inequality can also increase corruption (Juhász & Sági, 2019), so a general reduction in gender inequality can address the root causes of corruption (Boehm & Sierra, 2015). It can be seen that the issue of gender differences can occur in several aspects when examining corruption, yet gender roles and the roles played by different genders are less studied areas in corrupt situations. That is, not only the gender of the victim of corruption matters, but also the gender of the perpetrator can affect the perception and experience of corruption.

1.4. Works of the research team related to the topic

Most of the issues involved in the research have been addressed by members of the research team in the past. Since the combination of corruption, behaviour, culture, and methodological challenges provides the basis for research, members of the research team have a history of publication in these areas. One of the basic concepts of corruption research starts from the relationship between the level of corruption and cultural differences (Réthi, 2017a). In Réthi's entire research and publication activities (Khan, Réthi, & Szegedi, 2018; Réthi, 2012a, 2012b, 2017b; Réthi & Kása, 2021; Réthi, Kása, Szegedi, & Hauber, 2019), the relationship between corruption and culture plays a crucial role. Since the difference between perception and action can be identified in the case of culture and corruption, Heidrich and Réthi (2012) using the hypothesis of cultural pendulum effect (Bakacsi, 1999, 2014), the comparison between given cultural regions between the levels of perception of corruption was an important addition to better understand the relationship between perception and action. Bakacsi is an expert in the study of cultural aspects, who in decades of his work has already examined the role and relationship of culture in connection with many social and economic phenomena and factors, including corruption. Heidrich, an expert in cultural research, has also studied the manifestations of culture at the national, organizational, and individual levels over the past 20 years.
Kása has carried out significant methodological research in the last five years, with many methodological developments (Balázs Heidrich, Kása, & Krisztné Sándor, 2015; Richárd Kása, 2020; Losonci, Kása, Demeter, Heidrich, & Jenei, 2017), and is an expert of robust artificial intelligence based modelling (Kasa, 2014; R. Kása, 2011; Richárd Kása, 2011, 2012, 2015; Richárd Kása & Réthi, 2017) as a result of which he has also contributed to the methodological renewal of cultural research (N. G. Chandler, Heidrich, & Kása, 2016; N. Chandler, Heidrich, & Kasa, 2017; Balazs Heidrich, Chandler, & Kása, 2017; Balázs Heidrich, Chandler, Kása, & Kováts, 2016a, 2016b). He is a methodological expert in the study of similarly complex – often soft – social phenomena. In the last two years, he has also dealt with methodological issues in the perception of corruption (Réthi et al., 2019; Réthi & Kása, 2021). With her research in the field of psychology and management, Szászvári contributes to the behavioural and psychological aspects of the research (Csillag, Csizmadia, Hidegh, & Szászvári, 2019, 2020; Szabó, Czibor, Restás, Szászvári, Ágoston, Héger, et al., 2018; Szabó, Czibor, Restás, Szászvári, Ágoston, & Krasz, 2018; Szászvári, 2008; Szászvári, Csillag, Csizmadia, & Hidegh, 2019)

2. Hypotheses, key questions, aims of the project

Corruption has become one of the most popular topics in the social sciences. However, there is a lack of an interdisciplinary approach to corruption (Jancsics, 2014). Models dealing with corruption in different disciplines are often isolated from each other. One of the main starting points of our research is based on the categorization of Jancsics (2014), according to which most studies on corruption can be divided into three main categories: (1) models of rational actors, where corruption can be considered as a result of cost / benefit analysis of individual actors; (2) structural models that focus on the external forces that determine corruption; and (3) relational models that focus on social interactions and networks between corrupt actors.
All of the scientific literature on corruption has provided important insights into the study of the phenomenon, but each also has limitations (Koudelková & Senichev, 2015; Prasad, Martins da Silva, &

Nickow, 2019). In addition to Jancsics's (2014) categorization, we used the approach of Prasad et al. (2019) for designing our research, arguing that any corruption reform must face three challenges: (1) corruption exists because people need corruption to meet their needs – this the resource challenge; (2) corruption also exists because there is uncertainty about, for example, what constitutes a gift, what constitutes a bribe and what is private, what is common – this is the definition challenge; and (3) corruption persists because of behaviours that are considered moral according to alternative criteria, such as meeting the expectations of others, perceived or real societal expectations – this is an alternative moral challenge.
Our research project is based on two main research questions, which are as follows.

RQ1: What is the social sensitivity to corruption and how does national culture influence it?

RQ1.1 subquestion: (Mezo level) How do an individual's social and economic status and culture affect susceptibility to corruption?

Measuring sensitivity to corruption at the individual level often appears in the literature as an attempt to capture the discrepancies between the experience and perceptions of corruption and the relationship between the perception and experience of corruption at the individual level (Luminiţa Ionescu, 2013). Arguably, there are socio-demographic variables (e.g., gender, education, etc.) that play a relevant role in defining the perception of corruption (Banuri & Eckel, 2012; Lee & Guven, 2013; Melgar, Rossi, & Smith, 2010). Treisman's (2000, 2007) work is the most complete compared to the other studies mentioned, as he tries to include as many explanatory variables as possible and to examine the nature of corruption with them. Although many studies deal with economic development and the impact of other socio-demographic indicators (Ades & Di Tella, 1999; Adsera et al., 2003; Brunetti & Weder, 2003; Fisman & Gatti, 2002; La Porta, Lopez-de-Silanes, Shleifer, & Vishny, 1999, 1997; Persson et al., 2003; Treisman, 2000), but most of these findings are not based on individual-level data collection.
In connection with the first research question of our research, we seek the answer to how the social and economic status of individuals influences their susceptibility to corruption, which can only be established along indirect conclusions in the studies mentioned earlier. The compulsion to conform to others and to belong to a certain social or economic class significantly influences the level of susceptibility to corruption. Behaviour is significantly determined by culture, so we hypothesize that the susceptibility to corruption varies from culture to culture, especially since there is a consensus in many studies that culture is a determinant of corruption (Davis & Ruhe, 2003; Park, 2003; Treisman, 2000).

RQ1.2 subquestion: What is the relationship between the acceptance of corruption (low sensitivity), the experience of corruption and corrupt behaviour and how does culture moderate this relationship?

The differences between the perception, understanding and interpretation of corruption (Søreide, 2006) rightly call for an examination of the relationship between these three aspects of corruption, even a causal relationship (Nordin et al., 2013). We hypothesize that corrupt experiences — that is, when individuals are directly involved in corrupt activity — greatly distort perception, because we rely on our own impressions, negative experiences in these situations decisively influence perceptions of corrupt behaviour (Gutmann et al., 2020). This mechanism also affects the sensitivity to corruption, it is inseparable from it. Negative experiences and sensitivity to corruption also influence individuals' behaviour and, by mutually reinforcing each other, reproduce that behaviour. We have already learned about technicalization (Jávor, 2015; Jávor & Jancsics, 2016), however, there is still room for further research in connection with the exploration of individual-level relationships. Our goal is to gain a deeper understanding of the relationship between sensitivity to corruption, related experiences, and behaviour, and to better understand the impact of cultural traits on perceptions of corruption at the individual level.

RQ1.3 subquestion: (Macro level) To what extent does a country's cultural profile project a sensitivity to perceptions of corruption?

From the economic and socio-social variables influencing corruption previously mentioned studies (Ades & Di Tella, 1999; Adsera et al., 2003; Brunetti & Weder, 2003; Fisman & Gatti, 2002; Persson et al., 2003) we can conclude that starting from a certain cultural and economic profile of a given country, we can also make statements about the perception of corruption. The so-called developed, democratic, and liberal countries are considered less corrupt and it is assumed that democratic institutions (or trust in them) reduce the rate of corruption (Kolstad & Wiig, 2016; Treisman, 2007). It is generally believed that more economically developed countries are less corrupt, as evidenced by Transparency International's CPI, and several researchers have also reached similar conclusions (Budsaratragoon & Jitmaneeroj, 2020; Henrich, Heine, & Norenzayan, 2010; Paulus & Kristoufek, 2015). However, there is always the possibility that the measurement scale and evaluation criteria are distorted from some socio-cultural point of view (Lim & Firkola, 2000). Exactly how the development of a country affects individuals' perceptions of corruption needs further investigation. A country's profile based on economic development does not include cultural traits that also influence behaviour and perception. Therefore, the cultural profile of countries can play an important role in sensitivity and perceptions of corruption.

RQ2: Does the perception of an act of corruption depend on the gender of those involved?

RQ2.1 subquestion: Are we more tolerant to women's corruption or are they more ruthlessly judged by the public?

RQ2.2 subquestion: How do women are judged in corrupt acts change in different cultures?

The question that often arises in connection with the investigation of corruption is whether the corrupt act is in any way related to the person, including gender, of the perpetrators of the deviant act. In general, the actors in corrupt situations are identified as men (Dollar, Fisman, & Gatti, 2001; Juhász & Sági, 2019), which is also due to the fact that the profit-making characteristic of corruption is well related to competition (Ades & Di Tella, 1999; Emerson, 2006; Fath & Kay, 2018), which is essentially a masculine characteristic (Geert Hofstede, 1983). Most research examines the gender issue from the perspective of how masculine or feminine characteristics of a society affect the level of corruption within a given society (Alatas et al., 2009; Boehm, 2015; Chen, 2017; Esarey & Chirillo, 2013; Hossain, Nyamu Musembi, & Hughes, 2010; Melgar et al., 2010). One of the most typical occurrences of this is when examining the proportion of female decision-makers in a given society (Afridi et al., 2017; Barnes & Beaulieu, 2019; Dollar et al., 2001; Jha & Sarangi, 2018; Juhász & Sági, 2019; Swamy, Knack, Lee, & Azfar, 2001; Wängnerud, 2009). In our opinion, however, it is not possible to draw a clear conclusion from this indicator about the perception of corruption, because even if they examine the gender of the respondents, they do not usually deal with whether the perception of the corrupt situation changes depending on whether these actors are women or men.

According to Juhász and Sági (2019), we generally consider women to be less corrupt, but at the same time we judge them more severely when they are caught. This is based on the finding that Esary and Schwindt-Bayer (2019) found that women tend to be less members of the male-dominated social network. This argument seems logical in countries with masculine cultural traits, but following this logic, there should be no corruption in feminine societies or in more liberal societies where women are more represented in decision-making. According to Gerasymenko (2018), differences in the impact of corrupt practices on the lives of women and men are significant, which cannot be ignored and are also influenced by gender inequality (Stensöta & Wängnerud, 2018; Wängnerud, 2009).

If we accept the differences in corruption that can be traced back to gender differences, the question rightly arises that the gender of the perpetrators of corrupt acts can also influence the perception of corruption and the patterns of behaviour associated with it. As gender equality is strongly influenced by culture, we expect that the assessment of corruption situations also depends on the gender of the actors and the cultural environment. This is especially true when we also consider research that

corruption is more prevalent in more hierarchical societies (Fath & Kay, 2018), since sub-order relations are fundamentally inherent in masculine societies. In this way, in addition to the difference in perceptions of gender, power distance can also be an interesting aspect for examining the perception of corruption by gender.

3. Experimental design and methods to be used

3.1. Tools to be used

In our research, we contribute to the perception and attitude tests in the context of corruption perception and corrupt behaviour. Our basic research tool will be a system based on a randomly parameterizable questionnaire, based on complex corruption situations, realistic situations in which many aspects prevail at the same time and the respondents have the opportunity to evaluate them from several aspects at the same time. To this end, we plan the following research design based on the research goals:

1. Development of measurement scales to examine the perception of corruption. To measure the perception of corruption, we are developing a multidimensional measurement scale that uniquely enables the simultaneous examination of seven aspects. To do this, the first step is to develop complex corruption situations that are easy for respondents to interpret, short, and at the same time display all of the following seven dimensions at the same time, and along which the situations can be well differentiated. In each situation, therefore, a corruption case must be described in which:
   - nature of the advantage promised / obtained in the corruption activity (material, time, influence, annuity)
   - generally perceived roughness of corruption activity (mild, medium, rough)
   - the scene of corruption (individual level, government level, business level)
   - frequency of corruption activity (ad hoc, regular)
   - initiator of corruption (initiated by bribed person, initiated by corrupt person)
   - gender of those involved in the situation (gender of initiator, sex of actors involved in the corruption situation)
   - research subjects should evaluate the situations thus created on 2x2 two scales, which quadruples the information space formed by the above mentioned 7 dimensions:
     - accepting the behaviour of the corrupt person and judging the likelihood that the respondent would act in the same way in a similar situation as the corrupt person
     - accepting the behaviour of the corrupted person and judging the likelihood of the respondent would act in a similar situation in the same way as the corrupted person.

   In order for objective evaluation to be feasible, it is necessary to have situations in common with the seven dimensions, but at the same time to strive to keep the number of situations to be evaluated as low as possible. According to our calculation, this requires the production of twenty situations, which are the basis of our measurement tool, taking into account the essential need for objective comparability of the answers.
2. Due to the specifics of the research, for the identification of individual cultural characteristics, cultural measurement models can be considered, which capture the evaluation of cultural traits at the individual level. For this we will use the CVSCALE based on the Hofstede model (Djamen, Georges, & Pernin, 2020; Prasongsukarn, 2009; Yoo, Donthu, & Lenartowicz, 2011; Yoo & Shin, 2017), which measures the following dimensions:
   - Power distance
   - Collectivism – individualism
   - Uncertainty avoidance
   - Masculine – feminine

- Confucian dynamism (long term orientation)
- Indulgence – restrain

3. Considering the aims of the research, we need to develop a measurement tool that can be used with the above-mentioned measurement scales. The difficulty here is that in order to model the role of the sex of the perpetrator or instigator in the perception of corruption, but not to ask it explicitly (as this greatly distorts the result), we have to solve the gender (represented by first name) of the actors may change randomly in the situations, but we can measure the gender of the actors behind each assessment in the given situations. No ready-made application can solve this, so the necessary tool needs to be developed.

The research classifies perceptions of corruption into three groups:

- Implicit corruption perception: this is measured by the acceptance of corruption cases formulated in situations (identification, perception) in 4 dimensions, with a total of 18 aggregate variables
- Explicit corruption perception: this is measured by the manifestation of corruption perception observed at different levels of life, from the individual level to the macro level, with 5 measured variables
- Intention (the chance of corrupt action): this is measured by identifying the possible level of intention in being involved in a corrupt situation either on the demand side or on the supply side. This is measured by 4 dimensions with 18 aggregated variables.

In addition, individual culture levels were measured and calculated by determining 6 aggregates from 24 measured variables. We also measure demographic criteria by social status, financial status, and the subject's religiosity. Gender is also measured in three aspects:

- the gender of respondent
- the gender of corrupt person
- the gender of corrupted person.

3.2. Methods to be used

A total of 230 statistical variables (taking into account the gender segregation of 20 situations) are measured per respondent in the database created with the above-mentioned instruments. These measured variables are aggregated at several levels so that we can express corruption sensitivity and action at the following aggregated levels:

- Mild / medium / gross corruption
- Benefits of corruption: material / time / annuity / influence
- Corruption in the private / business / government sector
- Ad hoc / regular acts of corruption
- Judging the corrupt person / corrupted person.

The structure of the database is shown through a single data section in the block diagram below for a given respondent.

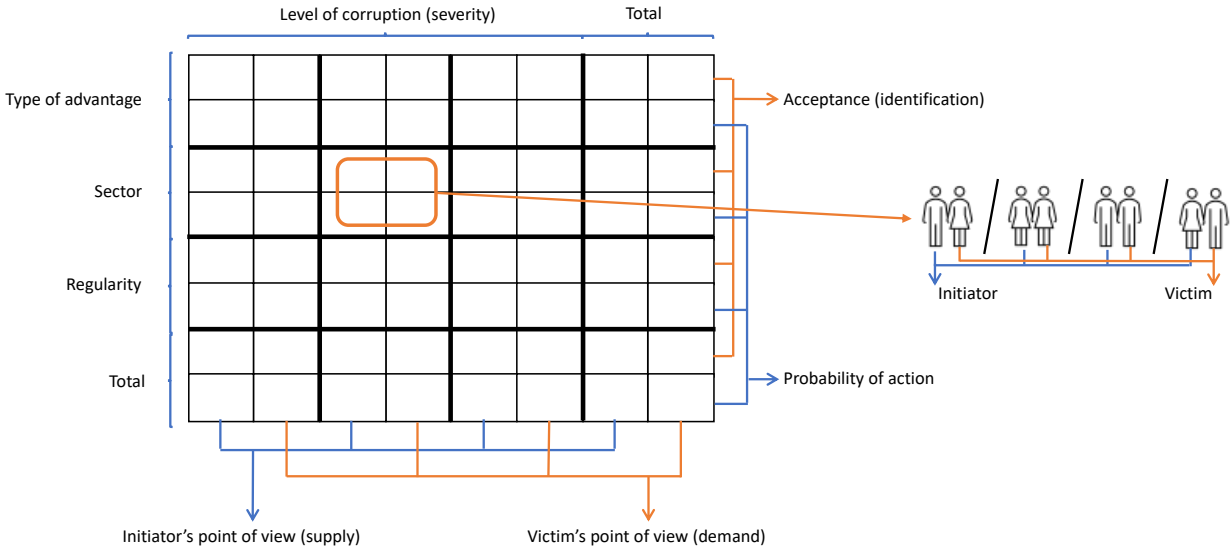

Fig. 1: Construction of a situation and its data structure

The generated database is processed as follows for research questions.

RQ1: The aggregate variables required to answer the first research question are generated by exploratory factor analysis and validated by a confirmatory factor model using the method common in the literature to solve such problems (Blunch, 2013; Füstös, Kovács, Meszéna, & Simonné Mosolygó, 2007). The aggregate variables thus produced can then be examined at multiple levels (type of corruption, stakeholder group, gender, regularity and level of corruption) and by multipath analysis of variance (Cramer et al., 2016), partial regression (Helland, 2014), and correspondence analysis (Blasius, 2011) can be tested for its relationships with cultural profiles, social and economic status profiles. The section of question ***RQ1.1; RQ1.2*** is fundamentally exploratory in that it presents the characteristics and evolution of the perceptions of corruption, experiences of corruption, and corrupt behaviour, and their interrelationship; but it is explanatory in that we try to explain the evolution of these three factors by social, economic, and cultural patterns.

Due to question ***RQ1.3***, an international extension of sampling is required. The country clusters developed in the GLOBE research are based on the cultural similarity of the countries belonging to one country cluster (Bakacsi, Takács, Karácsonyi, & Imrek, 2002; Brodbeck et al., 2000). The GLOBE dimensions build heavily on the work of Hofstede (Davis & Ruhe, 2003; Geert Hofstede, 1983) primarily in relation to the power distance, uncertainty avoidance, masculine, and feminine cultural dimensions. However, the sample of the GLOBE research came from a very special target group, as due to the management aspect of the research, company managers were interviewed during the sampling. The questionnaire used in the Hofstede research is better applicable to less specialized sampling. Thus, while accepting and using GLOBE research clusters, we use a quantitative methodology that allows individual cultural data collection and interpretation of results based on Hofstede research.

Cultural pendulum effect is based on differences between the co-movement of cultural values and practices (Bakacsi, 1999). Therefore, in relation to the perception, experience and sensitivity to corruption, we also assume that the difference between corrupt behaviour and perception also affect the sensitivity to corruption. Heidrich and Réthi (2012) have previously examined a similar issue using the results of the GLOBE research and the Transparency International's CPI index, but the study relied on secondary data, and in the present research we have the opportunity to work with primary data in both cultural and corruption aspects.

Previous studies on the proximity of Latin clusters and the Central European cluster (Bakacsi, Imrek, Primecz, Takács, & Török, 2001; Balázs Heidrich & Réthi, 2012) has encouraged us to use these assumptions in the international extension of our research.

Thus, the sampling frame shall be designed to cover the following aspects and to include at least two countries in the sample for each criterion variant:

- countries that are close to the two extremes of the masculinity scale (G Hofstede, 1998). Typically, masculine countries are Slovakia and Albania, Hungary, typically feminine ones are Slovenia, Ukraine, Russia, and neutral ones are Romania and Poland.
- countries that are close to the two extremes of the power distance scale (G Hofstede, 1998). The power distance is typically high in Albania, Russia, and low in Hungary, Germany, Sweden, and Denmark.
- countries that are close to their two extreme values on the uncertainty avoidance scale (G Hofstede, 1998). This value is low in Denmark and Sweden, and high in Poland, Russia and Hungary.

This pattern matching provides an opportunity to validate additional aspects, so our conclusions can be further differentiated into the following subsamples:

- Eastern European countries (Romania[1], Ukraine, Russia[2])
- Central and Eastern European Cluster (House et al., 2004) (Albania, Hungary, Poland, Russia, Slovenia)
- Visegrad countries (Czech Republic, Poland, Hungary, Slovakia)
- Western European countries (Denmark, Sweden, Germany
- Latin cluster (House et al., 2004) (Colombia, Peru, Brazil, Mexico)

Although these countries do not fully represent their clusters according to the clustering criterion (except for the Visegrad countries), since there are at least three countries in each group (sub-sample), it is suitable for detecting sample differences and similarities. However, when applying statistical methods, the moderating effect of other variables [economic situation (GDP), political system, development] must be taken into account and filtered out, for example by partial models or multi-way analysis of variance (Füstös et al., 2007), thus its influence on culture and the measured aggregate variables can be directly examined.

RQ2: The second research question has so far not been examined empirically in a correct way (Treisman, 2007), as the research either used secondary data (gender ratio in certain positions) (Wängnerud, 2009) or examined it directly with questionnaires where it was obvious to the respondent that the research aims to determine whether the subject considers women or men to be more corrupt (Dollar et al., 2001), or more sensitive (Eckel & Grossman, 1998; Juhász & Sági, 2019) to corruption. These research in the former case obviously show a pseudo-correlation and the direction of the causality cannot be justified (Thye, 2014) and in the latter case they explicitly influence the respondent with the question already. In contrast, in our method, in the situations of the questionnaire, we refer to their gender by the first names of the actors, thus it does not become clear to the respondent that this is the research (also) aimed specifically at this. On the other hand, for the purpose of objective comparability, the gender of the two actors in the same situation changes randomly per respondent, so the effects of other parameters of the situations can be filtered not only by statistical methods, but also directly at the database level. This also requires that we know exactly from which random questionnaires generated to respondents and in the given situations what names the actors had. We also solve this at the database level. With this technique, we can also answer the difficult question of whether the perception of corruption depends on the gender of the perpetrator or the person who corrupts it. It is a common stereotype that corruption is associated with men, but the connection is not scientifically proven, nor is it more or less lenient with women.

In the case of question ***RQ2.1***, we look for a correlation with the method of discriminant analysis (Silva & Stam, 1995) as to whether the perceptions of women in situations differ from the perceptions of men and what factors (demographic, cultural, religious) differentiate this. In the case of question ***RQ2.2***, we consider this relationship separately in national cultures with different specifications.

[1] The part East of the Carpathians

[2] The part West of the Urals

Causal relationships need to be examined in relation to both research questions. To do this, we build the explanatory model shown in the figure below. In this model, the aggregates of the measured variables are denoted by rectangles, and the composite variables derived and validated from them are denoted by ovals. The causal relationships of the compiled model are explained by structural equation modelling (SEM) based on partial correlation (In'nami & Koizumi, 2013).

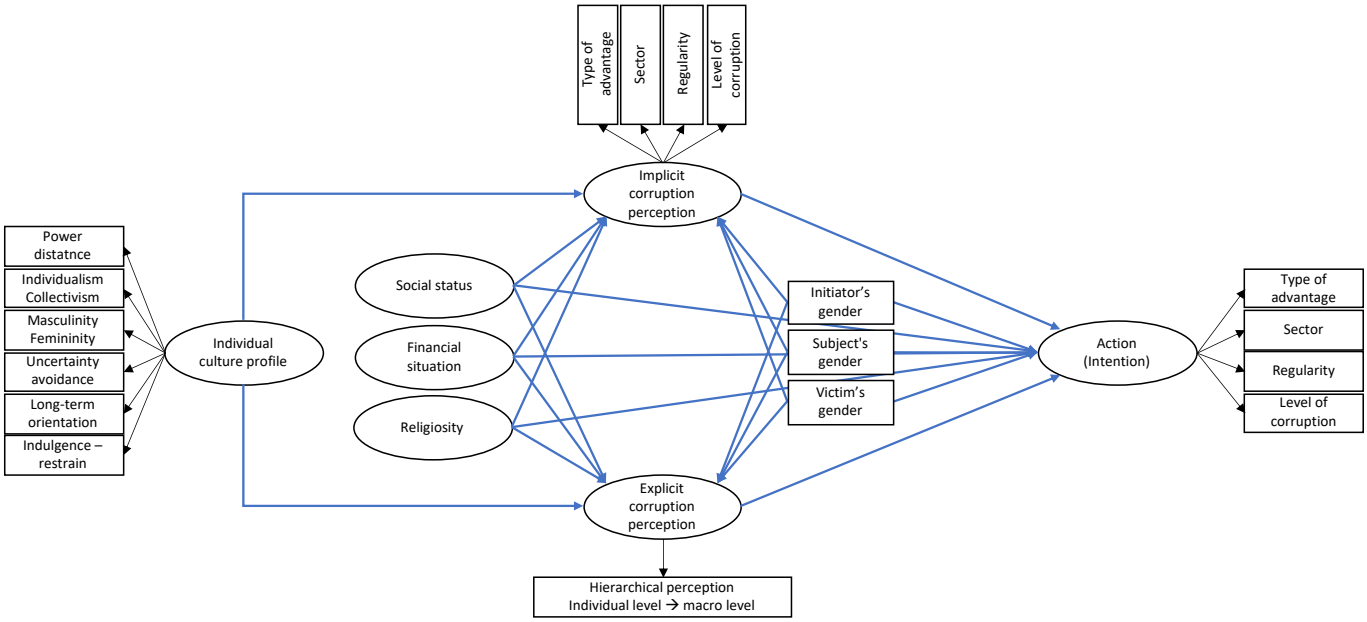

Fig. 2: Research framework

3.3. Sampling

In the sampling, we aim to represent the extreme cases of national cultural traits (masculinity, power distance, uncertainty avoidance) considered important for corruption with at least two countries in the sample. In addition, we are looking to compare the Eastern European and Latin clusters, so we are sampling in a total of 16 countries, for which we have started to build an informal research network.
In the research, the observation units are nationals of a given country who are still living in that country at the time of sampling and have already had paid job. We aim for a validated sample of at least 300 items from all countries, except Hungary, where we expect a sample of at least 2,000 items. The reason for this is that, on one hand, we also aim to show the Hungarian peculiarities, and on the other hand, the statistical sample fit (references) and the fit analysis of the models can be performed on this larger and more homogeneous sample. As we do not want to define a specific corruption perception indicator for a given country like the CPI, and we do not plan descriptive research, but exploratory ones, we need to strive for representativeness in the traditional sense only in terms of individual social strata (capital, rural; companies, multinationals) should be evenly stratified in the sample.

Table 2. Criteria for each subsample

Eastern Europe	Central and Eastern European cluster	Visegrad countries	Western Europe	Latin cluster
Romania (NEUT)	Albania (MAS) (H-PD)	Czech Republic (NEUT)	Denmark (L-PD) (L-UAI)	Colombia
Ukraine (FEM)	Hungary (MAS) (H-UAI) (L-PD)		Sweden (L-PD) (L-UAI)	Peru
	Poland (NEUT) (H-UAI)		Germany (L-PD)	Brazil
Russia (FEM) (H-PD) (H-UAI)		Slovakia (MAS)		Mexico
	Slovenia (FEM)			

4. Expected results

In the first year of the research, we mainly plan the results related to the literature search. In the second year, we draw our conclusions on research issues from a database of domestic empirical research, and then in the third year we plan the same on the international sample, supplementing our previous experience to examine the correlations with national culture. This year, we also plan to develop corporate corruption awareness training based on the results of the research so far. During each such training, we first assess the company's sensibility to corruption with a tool developed during the research, and then compare this with benchmarks made from their previous samples. Based on the results, we organize corporate corruption sensitization workshops, with which we can prepare the leaders (employees) of a company to identify corrupt behaviour and improve sensitivity to it.
According to our expectations the realization of the project
is expected to produce the following results.

Table 3. Project deliverables

PERIOD	PLANNED ACTIVITIES	PLANNED DELIVERABLES
1ST YEAR (01.09, 2021 - 08.31, 2022)	Research question 1-2-3: Systematic literature review Research question 1-2-3: Theoretical review, conceptualization (corruption perception models)	2 manuscripts in English 1 manuscript in Hungarian 2 conference presentations (domestic) Creating a research website (to ensure the availability of results and research data)
2ND YEAR (01.09, 2022 - 08.31, 2023)	Research question 1-2-3: Development of measurement system and tool Research Question 1-2-3: Building a research network for empirical data collection Research question 1-2: data collection (domestic), data analysis, modelling	2 publications in English in international journals 2 publications in Hungarian 2 international conference presentations 1 scientific workshop (research network)
3RD YEAR (01.09, 2023 - 08.31, 2024)	Research Question 1-2-3: International Data Collection Research question 1-2-3: data analysis, modelling Development of training scenarios	3 publications in English in international journals 2 publications in Hungarian 3 international conference presentations Conducting 1 pilot training at a domestic company
4TH YEAR (01.09, 2024 - 08.31, 2025)	Research question 1-2-3: Preparation and online display of benchmarks from results obtained from international data Research Question 1-2-3: Writing additional publications Research question 1-2-3: Preparation of a monograph that can also be used in university education Organizing an international workshop for the long-term maintenance and expansion of the research network (reviewing tools and methods based on research experiences), developing and coordinating international training scenarios	2 publications in English in international journals 3 international conference presentations 1 monograph Final training scenario and conducting 4 domestic corporate sensitization trainings

SUSTAINABILITY
We will maintain and expand the research network even after the research is completed, and we plan to repeat the data collection every two years in the participating countries.

5. Research infrastructure

The realisation of our research does not require any special infrastructure. The procurement of one laptop is planned to be covered from the budget. Our research methodology (situation-based random factor questionnaire) requires licensed data analysis software (SPSS and IBM AMOS), which are already purchased by our institution. As for the human resources of the project, 6 researchers (3 senior researchers and 3 other researchers) will be involved. Furthermore, we are planning to invite undergraduate and graduate students to support us mainly in the course of data validation, normalization and analysis. One member of our team (Ágnes Sándor) is to be employed in frame of the project, she would be involved as researcher, besides being responsible for reporting tasks, project administration and organising the project related events.

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