AALBORG UNIVERSITY
DENMARK

MASTER'S THESIS

CORPORATE REPUTATION OF T-SYSTEMS SLOVAKIA

An Empirical Test of a Model Measuring Corporate Reputation from the Perspective of the Local Community

JUNE 2014

AALBORG UNIVERSITY
DENMARK

MSc. International Marketing

Master's Thesis

10th semester

Corporate Reputation of T-Systems Slovakia: An Empirical Test of a Model Measuring Corporate Reputation from the Perspective of the Local Community

The thesis has been prepared by

Daniel Konecny

Number of pages: 101

Number of strokes: 161 482

Delivery date: 6th June 2014

Executive summary

Although the construct of corporate reputation has been well discussed in the literature, little attention has been put into its measuring from the perspective of the local community. This paper addresses a need identified by T-Systems Slovakia and empirically tests the hypothesized model measuring the corporate reputation of T-Systems Slovakia from the perspective of the local community.

The hypothesized model was built based on four commonly used, quantitative measures of corporate reputation. The proposed model was empirically tested on the sample of 156 respondents by means of a self-administered questionnaire.

Using the confirmatory factor analysis, 15 variables loading to five latent variables were assessed as reliable and valid measures of corporate reputation in the local community. Based on the confirmatory factor analysis, the structural model was built. The results of the structural equation modelling analysis indicated the significant and positive effect of communication, workplace, and citizenship on emotional appeal.

In the light of the previous findings, the final model consisting of emotional appeal and its drivers – communication, citizenship, and workplace – was concluded to be the reliable and valid measure of the corporate reputation of T-Systems Slovakia from the perspective of the local community.

Further analyses revealed that the grand mean of emotional appeal reached the value of 2,95 on the 7 point-likert scale, where the value 1 represents positive results and the value 7 stands for negative results. This finding indicates that T-Systems Slovakia tends to have rather a positive reputation in the local community. Similarly, the drivers of corporate reputation were evaluated positively as the values for respective grand means were closer to 1 than 7. However, the limitation of these findings lies in the relatively small sample size compared to the size of population. Therefore, it is recommended to use the final model to obtain more responses and thus to obtain more accurate results.

Moreover, the findings implies that for groups of people who know an employee of T-Systems Slovakia or the industry where the company operates in, the fastest way of changing corporate reputation is through communication. For the remaining groups, the

fastest way of changing corporate reputation is through improving company's workplace.

Additionally, research addresses a gap identified in the literature and proposes a model that can be applied to measure corporate reputation from the perspective of the local community. However, the model was confirmed only in one industry setting. To generalize the model, it is recommended to test it in different industry settings, as well.

It is suggested by some scholars that different stakeholders have different opinions about the company. Thus, the company has different reputations in different stakeholder settings. This model was only validated in one stakeholder setting – the perspective of the local community. If the company wants to use the same model in different stakeholder settings, the model must be validated for these stakeholder settings, as well.

Contents

Executive summary 2

List of tables 5

List of figures 6

List of acronyms 7

1 Introduction 9

1.1 Problem formulation 10

2 Literature review 12

2.1 What is corporate reputation? 12

2.2 What is corporate reputation not? 18

2.3 How is corporate reputation measured? 20

3 Methodology 29

3.1 Basic assumptions 29

3.1.1 Concept of reality 29

3.1.2 Concept of science 30

3.1.3 Scientific ideals 30

3.1.4 Ethical and aesthetical aspects 31

3.2 Methodology 31

3.2.1 Methodological view 31

3.2.2 Methodological procedures and methodics 32

4 Analysis 53

4.1 Sample situation - descriptive statistics 53

4.2 The structural equation modelling (SEM) analysis 57

4.2.1 The confirmatory factor (CFA) analysis - the measurement model 57

4.2.2 The structural equation modelling (SEM) analysis - the structural model 70

5 Discussion 76
5.1 Presentation of findings 76
5.2 Implication of the research 78
5.3 Limitations 81
5.4 Future research 83
6 Conclusion 85
7 References 88
Appendix 1 95
Appendix 2 98

List of tables

Table 1 Comparison of different measures of corporate reputation 24
Table 2 Comparison of corporate reputation attributes 27
Table 3 The overall structure of the questionnaire 46
Table 4 Hypotheses - CFA 49
Table 5 Hypotheses - SEM 51
Table 6 General characteristics of the sample 53
Table 7 Demographic characteristics of the sample 55
Table 8 Kurtosis 56
Table 9 Reliability of measures 57
Table 10 Initial model fit indices 60
Table 11 Modification indices with a threshold for modification indices of 20 60
Table 12 First modified model fit Indices 61
Table 13 Modification indices with a threshold for modification indices of 5 61
Table 14 Second modified model fit indices 62
Table 15 Invariance model fit indices 64
Table 16 Metric invariance summary 65

Table 17 Validity and reliability test 65
Table 18 Disciminant validity matrix 66
Table 19 Final model fit indices 68
Table 20 Measurement model results 68
Table 21 Discriminant validity matrix 69
Table 22 CFA hypotheses summary 69
Table 23 SEM model fit indices 72
Table 24 Regression weights 72
Table 25 Multigroup moderation - known_employee_dummy 73
Table 26 Multigroup moderation - industry_dummy 74
Table 27 Multigroup moderation - product_dummy 74
Table 28 SEM hypotheses summary 75
Table 29 Corporate reputation indices 77
Table 30 Age and gender distribution 82
Table 31 Coding scheme 98

List of figures

Figure 1 Content specification 38
Figure 2 Emotional appeal model 39
Figure 3 Presence on the local market model 39
Figure 4 Citizenship model 40
Figure 5 Workplace model 40
Figure 6 Communication model 41
Figure 7 Performance model 41
Figure 8 CFA – measurement model 48
Figure 9 SEM – structural model 51
Figure 10 Initial measurement model 59
Figure 11 Modified measurement model 63
Figure 12 Final measurement model 67
Figure 14 Final structural model 71

List of acronyms

AMOS – Analysis of Moment Structures

AVE – average extracted value

BtB – business to business

CEO – chief executive officer

CFA – confirmatory factor analysis

CFI – comparative fit index

CI – centrality index

CMIN – the chi-square value

DF – degree of freedom

H – hypothesis

ICT – information and communication technology

IFI – incremental fit index

IT – information technology

MAC – most admired companies

MSc. – Master of Science

NFI – normed fit index

NNFI – nonnormed fit index

P – p-value

PR – public relations

RFI – relative fit index

RMSEA – the root-mean-square error of approximation

RNI – relative noncentrality index

ROE – return on equity

ROI – return on investment

RQ – Reputation Quotient

SEM – structural equation modelling

SPSS – Statistical Package for the Social Sciences

TLI – Tucker–Lewis index

TV – television

1 Introduction

Managers and a growing number of scholars have become increasingly aware of importance of corporate reputation as an intangible asset providing a sustainable competitive advantage in the market place. (e. g. Boyd et al., 2010, p. 588; Rindova et al., 2010, p. 617; Pozni et al., 2011, p. 15). Corporate reputation affects the way in which various stakeholders behave towards a company (Chun, 2005, p. 91). Corporate reputation cannot be bought; it is built over time requiring managers to carefully nurture interdependences and complex relationships (Boyd et al, 2010, p. 588).

Since its establishment in January 2006, T-Systems (later only T-Systems), the business customer brand of Deutsche Telekom in Slovakia, has become one of the biggest information and communication technology (ICT) companies in Kosice Region. T-Systems operates ICT systems for multinational corporations and public sector institutions in more than 20 countries.

In relation to corporate reputation, the management of T-Systems wants to know how the company is perceived in a local community after eight years operating in the region. The initiative is very first of such kind and should be implemented on a regular basis to monitor and measure an impact of the company's activities in the local community.

The company's activities in the region target wide range of groups ranging from high school and university students to seniors. All the customers are located abroad and the relationships with them are managed from Germany. Therefore, the main aim of the company's activities in the region is to increase awareness and directly or indirectly attract more employees to apply for a job at T-Systems. As corporate reputation of T-Systems affects the way in which the local community and its various groups behave towards the company, managing this intangible asset becomes essential.

The lack of systematic tools measuring corporate reputation and gaps in literature, foster a need for a new model that could be used to monitor and measure the corporate reputation of T-Systems in the local community.

1.1 Problem formulation

Deriving from the above-mentioned issues, the corporate reputation of T-Systems from the view of the local community in Kosice Region sets the nexus of this project.

The project aims to answer the following question:

- ***What is the corporate reputation of T-Systems Slovakia from the perspective of the local community in Kosice Region, Slovakia?***

Additionally, in order to answer the previous question, following questions need to be addressed, too:

- ***What is corporate reputation?***
- ***How is corporate reputation measured?***
- ***What are drivers of corporate reputation?***

Based on the formulated problem, these project objectives are stated:

- *develop a deep understanding of the construct of corporate reputation in order to identify key measures of corporate reputation and its attributes identified from literature*
- *develop a theoretical model for measuring the corporate reputation of T-Systems from the view of a local community determining critical attributes of reputation and relationships between them*
- *empirically test the proposed model*
- *apply the model to analyze the corporate reputation of T-Systems from the view of a local community*
- *based on findings, suggest further actions for a development of the measurement model in the context of T-Systems*

This paper aims to investigate corporate reputation of the company only from the view of a local community. Even though some scholars argue that corporate reputation should be investigated from the view of multiple stakeholders, the view of other stakeholders will not be taken into consideration in this project. However, I acknowledge that the different stakeholders might also influence the company's overall reputation.

Additionally, T-Systems is headquartered in Kosice Region, but it also employs residents from Presov Region. This project, however, will focus only on residents in Kosice Region, especially in Kosice City District (the main district of Kosice Region).

To test empirically the proposed model, a structural equation modelling (SEM) method will be applied. The method includes two phases of analysis - an evaluation of measurement model fit and structural model fit. While assessing the measurement model fit, thus achieving an adequate fit, some model modifications might be performed. Once the adequate model fit is achieved, the structural model fit will be assessed. In this step, I will aim to either accept or reject the proposed structural model. Therefore, I will not modify the model to achieve a better model fit or to discover other relationships between latent variables.

The findings of this project might fill some gaps identified in literature and suggest a new model of measuring corporate reputation from the view of a local community. Additionally, the project might address a need identified by T-Systems and provide the company with an accurate model that can guide research of corporate reputation of T-Systems from the view of a local community. The aim of the project is to create new, case-specific knowledge - the model for measuring corporate reputation from the point of view of the local community - that can be improved over time based on results of the analysis.

This paper will be divided into four main parts. A deep understanding of corporate reputation will be discussed in the literature review chapter. In the next chapter - methodology - a theoretical model will be developed. After, the proposed model will be tested in the chapter with analysis. Finally, the findings will be presented, implications will be assessed, and future research will be suggested in the discussion chapter.

2 Literature review

The purpose of this chapter is to review literature of corporate reputation, evaluate its historical development, and bring a definition that serves as the theoretical basis of this project. To determine this trend, I searched for peer-reviewed scholarly articles indexed in Google Scholar and Aalborg University Library's database. I focused my attention on the articles in which the phrase 'corporate reputation' appeared in a title or abstract, and the title itself indicated that authors focused on this concept in their research. Additionally, I tracked the work of scholars mentioned in these articles to their original research papers what enabled me to take into consideration articles that were not find through my search.

To begin with, I will describe corporate reputation and evolvement of its different classifications over time. Furthermore, as the concepts of corporate reputation, identity and image were often mentioned in the reviewed articles and Bromley (2001, pp. 316) argues that they are often ambiguous, I discuss distinctions between these concepts. Finally yet importantly, I will present different measures of corporate reputation and choose the most suitable ones for this research.

2.1 What is corporate reputation?

This part of my literature review aims to answer what corporate reputation is.

The concept of corporate reputation has attracted the attention of companies and scholars during the past few years. Clive (1997, p. 19) argues that the subject of corporate reputation used to hardly make a list of subjects for a top management before 1997. He adds that with a presence of several driving forces like people's hunger for information or an economic competition, the significance of corporate reputation is changing rapidly (Clive, 1997, p. 19). Despite the increasing momentum of the corporate reputation concept, Barnett et al. (2006, p. 26) argue that the commonly agreed definition is lacking.

'Corporate reputation emerges from the images held by various publics of an organization' (Caruana and Chircop, 2000, p. 43). When defining corporate reputation, many scholars turn their attention to the corporate reputation literature review of

Fombrun and Riel from 1997 (e.g. Barnett et. al., 2005; Fombrun et al. 1999; Chun, 2005; Walker, 2010; Clardy, 2012).

In early literature, Fombrun and Riel (1997, p.5) argued that corporate reputations remained relatively understudied; they attributed this lack of a systematic attention of corporate reputation to diversity of relevant academic literatures. In their research, Fombrun and Riel (1997, p. 5) analyzed the diversity of academic disciplines that actively contribute to knowledge in this area, whether grounded in strategic management, an organization theory, economics, marketing, communications, accounting or finance. They defined corporate reputation from the perspective of five distinct academic disciplines: economics, marketing, organizational behaviour, sociology, strategy and accountancy. Their intention was to show that corporate reputation was understood differently under different disciplines and that the commonly agreed definition of corporate reputation was missing.

Chun (2005, p. 92) explains that some of definitions within the literature overlap and some of them conflict. She further highlights that the most marked differences exist definitions of reputation from an economic discipline and from marketing (Chun, 2005, p. 92).

Under the economic discipline, scholars often see reputation as either traits or signals (Fombrun and Riel, 1997, p. 6). Signalling theorists describe reputation as an activity often linked to a value of a firm or quality of products on imperfect information markets. Houston (2003, p. 330) compares reputation to a signal that reduces information asymmetries in the market. He predicts that reputation will be positively linked to changes in firm's market values. Shapiro (1983), another signalling theorist, considered reputation as a type of a signalling activity where quality of products produced before served as a signal of quality of products produced in future (Shapiro, 1983, p. 659).

In a marketing discipline, reputation (often labelled as brand image) refers to information processing of external subjects - often customers – attributing a cognitive and affective meaning to cues perceived about an object directly or indirectly confronted with (Fombrun and Riel, 1997, p. 7).

Strategists see reputation as decision-making behaviour that creates mobility barriers (Caves and Porter, 1977, p. 261). As established reputation is difficult to imitate, some scholars refer to it as an asset (Fombrun and Riel, 1997, p. 7). Tadelis (1999, p. 548) for example developed a model in which firm's only asset is its name summarizing its reputation. Similarly, Barney (1991, p. 115) and Dierickx and Cool (1989, p. 1506) argue that reputation is a non-tradable asset and a source of a sustained competitive advantage.

To organizational scholars, corporate reputation is rooted in sense making experience of employees (Fombrun and Riel, 1997, p. 8) and defines organization's activities in relation to others within the environment (Fombrun and Riel, 1997, p. 8; Porac and Thomas, 1990, p. 231). Porac and Thomas (1990, p. 231) argue that organizations define what they are or what they want to be based on cognitive structures being used as sense making tools. Fombrun and Riel (1997, p.8) compare these cognitive structures to company's culture and identity. Thanks to the sense making tools, managers not only define what the firm stands for, but also justify their interactions with key stakeholders (Fombrun and Riel, 1997, p. 8; Porac and Thomas, 1990, p. 231).

In sociology, scholars describe corporate reputation as an increase in internal organizational efficiency that earns prestige to an organization (DiMaggio and Powell, 1983, p. 153). This can make it easier for organizations to be acknowledged as legitimate and reputable (DiMaggio and Powell, 1983, p. 153). Ashfort and Gibbs (1990, p. 191) argue that managers seek to earn legitimacy through an array of substantive and symbolic practices. Shrum and Wuthnow (1988, pp. 882-883) add that in sociology, reputation is widely assessed from results of a survey creating so called 'quality ratings' or 'prestige rankings'. They further argue for a reputational status of an organization influenced by organization's social interactions with key intermediaries in a large scale.

Accountants define corporate reputation as intangible asset created from sustained social interactions in which past impressions affect future behaviours (Rindova and Fombrun, 1999, p. 706).

Fombrun and Riel (1997, p.8) identified that early literature on corporate reputation from six different disciplines shares these similar characteristics:

- **Reputations are derivative characteristics** - Fombrun and Riel (1997, p. 10) argue that these characteristics are second-order characteristics of industrial systems, and they crystallize the status of a firm.
- **Reputations are the external reflection of company's internal identity** - an outcome of sense making by employees about company's role in a society (Fombrun and Riel 1997, p. 10).
- **Reputations constitute mobility barriers** - firms' prior resource allocations (that are difficult to imitate) constrain both firms' actions and rivals' reactions (Fombrun and Riel 1997, p. 10).
- **Reputations summarize assessments of past performance** - this consists of diverse evaluators who assess firms' ability and potential to satisfy diverse criteria (Fombrun and Riel 1997, p. 10).
- **Reputations inform about firms' overall attractiveness -** reputations derivate from multiple but related images of firms among all of stakeholders (Fombrun and Riel 1997, p. 10).
- **Reputations embody an economic performance and social responsibilities.**

Based on the similarities across disciplines, Fombrun and Rindova, 1996 (cited in Fombrun and Riel, 1997, p. 10) formulated an early definition of corporate reputation:

> *'Corporate reputation is a collective representation of a firm's past actions and results that describes the firm's ability to deliver valued outcomes to multiple stakeholders'.*

An alternative approach to understanding of corporate reputation was proposed by Rose Chun in 2005. The author argues that it is possible: *'to identify three schools of thought that are in current use within the reputation paradigm: evaluative, impressional and relational'.* While Fombrun's and Riel's (1997) approach to understanding corporate reputation reflects diversity of academic disciplines, Chun (2005) relates her understanding to which stakeholders are taken as a focal point (Chun, 2005, p. 93).

Single stakeholder interests are considered in evaluative and impressional schools; a multi stakeholder view is considered in relational schools (Chun, 2005, p. 93).

'In the evaluative school, reputation is assessed from its financial value or from the short-term financial performance of the organization' (Chun, 2005, p. 93). Various approaches to brand valuation like media reputation rankings fall within the evaluative school (Chun, 2005, p. 93.). Shareholders, the CEO or investment advisers whose main interests are financial attributes are the key stakeholder here (Chun, 2005, p. 93).

While financial figures or performances dominate in the evaluative school, the impressional school assesses reputation in terms of relevant stakeholders' perceptions or impressions of the organization (Chun, 2005, p. 93). *'Image, identity and personality are typical terms used in the impressional school.'* (Chun, 2005, p. 93). Employees or customers are major stakeholders here (Chun, 2005, p. 93).

The main characteristic of the relational school is *'a multiple stakeholder approach in defining reputation'* (Chun, 2005, p. 94). Corporation's overall reputation shapes 'sub-reputations' reflected in the view of employees, customers, suppliers, investors, media and other stakeholders (Post and Griffin, 1997, p. 165). Additionally, Fombrun et al. (2000, p. 242) suggest that corporate reputation is a collective construct that describes an aggregate perception of multiple individuals.

Barnett et al. (2006) brought another approach to understanding corporate reputation. They (Barnett et al., 2006, p. 26) explain that events of last few years have moved corporate reputation to a spotlight; therefore, it is hard to argue that corporate reputations remain understudied. In their review of 49 unique sources (articles or books) with definitions of corporate reputation, Barnett et al. (2006, p. 32) identified three distinct meaning clusters in definitional statements: reputation as a state of awareness, reputation as an assessment, and reputation as an asset.

The authors explain that reputation as awareness: *'encompasses those definitions that referred to a term or used language indicating that observers or stakeholders had a general awareness of a firm but did not make judgments about it'* (Barnett et al., 2006, p. 32). In contrary, the second cluster – reputation as an assessment – includes

definitions indicating that observers were involved in the assessment of the status of the firm (Barnett et al., 2006, p. 32). Reputation as an asset cluster consists of definitions that referred to reputation as something of a value to the firm (Barnett et al., 2006, p. 33).

In their research Barnett et al. (2006, p. 34) tried to isolate the exact nature of corporate reputation and provided a carefully crafted definition of corporate reputation:

> *'Observers' collective judgments of a corporation based on assessments of the financial, social, and environmental impacts attributed to the corporation over time.'*

Yet, in 2012, Clardy argues that *'The construct of organizational reputation suffers from lack of consistent definition'* (Clardy, 2012, 285).

Despite this argument, perhaps Gottschalk proposed the most agreeable definition (2011, p. 28):

> *'It is overall estimation and judgment of an organization that is held by its internal and external stakeholders based on the corporation's past actions and expected future behaviour. Corporate reputation is the collective judgment of a corporation; it is set of characteristics attributed to a firm by stakeholders.'*

Gottschalk's (2011) definition is based on the relational schools, thus, on a multi-stakeholder view. However, my aim in this project is to assess reputation from the view of only one stakeholder - the local community. Therefore, I need to focus my attention on definitions that consider single stakeholder interest and contextualize Gottschalk's (2011) definition.

Customers and employees were described as main stakeholders in literature of corporate reputation with a single stakeholder view. The local community was not considered as an important stakeholder in this literature. In fact, the local community was omitted in literature of the multiple-stakeholder view, as well. I would argue that this stakeholder is important and its evaluation and judgement of the firm shape the overall reputation of the firm. The local community plays a significant role especially in situations where all customers of the focal company are located on foreign markets. The

definition of corporate reputation that should serve as the theoretical basis of this project needs to consider this gap.

Taking into consideration Barnett's et al. (2006) definitional clusters of corporate reputation, my aim in this project is to analyze how the local community is aware of T-Systems and what its assessment is.

Based on the reviewed literature and the above arguments, the definition of corporate reputation for the purpose of this project should include these characteristics:

- a point of view of local community,
- cumulative over time
- based on company's past actions and expected future behaviour
- local community's awareness of the firm
- local community's judgment of the firm

Taking into consideration the above mentioned characteristics, Barnett's et al. and Chun's (2005) definitional clusters, and being inspired by Gottschalk's (2011) definition of reputation, I consider corporate reputation for the purpose of this project as:

> *'It is overall awareness (estimation) and judgment of the organization held by its relevant stakeholder - the local community - based on the organization's past and current actions, and expected future behaviour.*

This definition will serve as the theoretical basis of this project.

2.2 What is corporate reputation not?

Clardy (2012) and Barnett et al. (2006) explain that this lack of consistent definition partly attributes to confusion over the terms – identity, image and reputation. Walker (2010, p. 366) adds that not all authors make differentiation between these frequently confused terms. He suggests that this is attributive to the statement of Barnett et al. (2006, p. 28): *'Identity, image and reputation are still often used interchangeably'.*

Several scholars describe differences between corporate image, identity and reputation (Marziliano, 1997; Clardy, 2012, Walker, 2010; Barnett et al., 2006; Chun 2005; Markwick and Fill 1997).

Davies et al. (2001, p. 114) describe the identity as an internal view of the company. Chun (2005, p. 96) argues that the identity is variously defined in literature and that there are two main themes: an organizational identity and a corporate identity. Marwick and Fill (1997, p. 397) suggest that: *'Corporate identity is the organization's presentation of itself to its various stakeholders and the means by which it distinguishes itself from all other organizations.'* They add that the corporate identity represents how the organization would like to be perceived (Marwick and Fill, 1997, p. 397). Similarly, Chun (2005, p. 97) argues that the corporate identity is often referred as a desired identity. On the other hand, she describes the organizational identity as employee's perception of the organization - an answer to the question 'who we are?' or 'how do we see ourselves?' (Chun, 2005, p. 96).

In contrary, the image refers to a view of the company held by its external stakeholders (Davies et al., 2001, p. 113); it refers to a way the organization presents itself, either deliberately or accidentally (Marwick and Fill, 1997, p. 398). As an organization has many stakeholder with a variety of backgrounds, Marwick and Fill (1997, p. 398) argue that it cannot be expected that there will be a single, uniform and consistent image. Whetten and Mackey (2002, p. 1) suggest *'Organizational image is what organizational agents want their external stakeholders to understand is most central, enduring, and distinctive about their organization.'* Chun (2005, p. 95) compares the image to an answer to the question: 'How others see us?'.

Reputation is often used synonymously with image and this can lead to confusion (Marwick and Fill, 1997, p. 398). It has been claimed that reputation is not just another word for image (Chun, 2005, p. 98). It is underlined in the relational school of thought where identity, desired identity, and image constitute corporate reputation (Chun, 2005, p. 98). Additionally, '*Reputation is taken to be a collective term referring to all stakeholders' view of corporate reputation, including identity and image'* (Davies et al., 2001, p. 114). Marwick and Fill (2005, p. 398) suggest that reputation is reflection of

historical, accumulated impacts of previously observed identity cues. They add that reputations are more durable than images and support organizations in favourable cases (positive reputations) or distrust in adverse situations (negative reputations) (Marwick and Fill, 2005, p. 398). Barnett et al. (2006, p. 34) describes corporate reputation as judgments made by observers about a firm rooted in perceptions of the firm's identity and impressions of its image.

2.3 How is corporate reputation measured?

To review the literature on corporate reputation measures, I searched for peer-reviewed articles indexed in Google Scholar, Aalborg University Library's database, and Corporate Reputation Review journal. Once a title or an abstract indicated that the article includes corporate reputation measurement, I proceeded with reviewing it. As scholars often referenced other scholars' work, I traced the idea to the original article. This enabled me to review more articles that I could not find by searching in databases.

Walker (2010, p. 370) considers difficulty in measuring the corporate reputation construct, after difficulty with the commonly agreed definition, as a second fundamental problem in this field. *'A number of measurement approaches are available reflecting the number of possible strategies towards measuring corporate reputation'* (Chun, 2005, p. 98). However, Chun (2005, pp. 98 - 99) explains that many measurement scales are criticized for being overly focused on the financial performance, on the view of single stakeholder or for using single one-dimensional measurement items. She adds that many scholars borrow their approaches from existing scales – e.g. brand equity, corporate image, or identity measurement – without conceptualising them.

On the other hand, Stacks et al. (2013, pp. 564-565) argue that regardless the disparity among the definition and its measure, the research of reputation measurement has persisted.

Among others, Stacks et al. (2013), Clardy (2012) and Helm (2005) have reviewed existing measures of corporate reputation. While Stacks et al. (2013) provide the historical overview of reputation measurement, Clardy (2012) reviewed the measures

based on operational definitions. Helm (2005) reviewed different methods of a measure based on the epistemic nature of reputation.

Stacks et al. (2013) found out that both historic and traditional measures of reputation rely heavily on survey or attitude scale methodologies (Stacks et al., 2013, p. 566).

Fortune Magazine's survey of America's most admired companies (MAC) annually published since 1983 is one of the first and most prominent survey or attitude scale methodology (Stacks et al., 2013, p. 566). Every year, the magazine Fortune invites senior executives, outside directors and financial analysts to rate a list of ten largest companies on eight criteria in their own industry (Fombrun, 1998, p. 327). According to Fombrun (1998, p. 327) the MAC survey spawned a veritable industry devoted to profiling corporate reputation. Grand aggregation approach to measurement of reputation is used in the MAC survey (Stacks, et al. 2013, p. 566). Stacks et al. (2013, p. 566) present clear measurement problems associated with the aggregation approach. Perhaps, the most significant problem is associated with the fact that reputation is ranked only by industry professionals: *'The grand aggregation approach does not take into consideration the fact that reputation resides in the eyes of different stakeholders and that stakeholders are normally not equally important for the organization*' (Stacks, et al. 2013, p. 566). Fombrun (1998, p. 327) adds that this survey is biased as it tends to focus on larger, public companies and stress the financial indicators.

The development of the MAC survey resulted in a variety of alternative professional measures for reputation (Fombrun 1998, p. 327; Stacks et al., 2013, p. 566). As Wartick (2002, p. 382) examined several of these early professional measures, he found out that they appeared to have little to do with the reputational measure. Additionally, he explains that methods underlying these ratings had to do more with author's attempt to manipulate or artificially construct reputation.

In 1994, Leslie Gaines-Ross and John Gilfeather launched the 'groundbreaking' survey - Leveraging Corporate Equity (Gaines-Ross, 1998, p. 52). This measure takes into consideration the linkage between components of reputation and the payoffs in terms of supportive behaviour that the previous research has neglected to evaluate (Gaines-

Ross, 1998, p. 52). Five major components were studied to arrive to a corporate equity score: awareness, familiarity, overall impression, perception and supportive behaviour (Gaines-Ross, 1998, pp. 52 - 53).

Fombrun developed another method to measure corporate reputation in 2000 - The Reputation Quotient (RQ) (Stacks et al., 2013, p. 568). Fombrun et al. (2000, p. 254) describe the RQ as a valid, reliable, and robust instrument for measuring corporate reputations. The RQ was well accepted by Wartick (2002, p. 384) who explains that it focuses on a non-business executive stakeholder group. On the other hand, the measure is criticized by Stacks et al. (2013, p. 568) as it may lose substantial information from one particular stakeholder group. In 2006, Fombrun and the Reputation Institute produced the updated version of the RQ - the RepTrak® (Stacks et al., 2013, p. 568). The Rep Trak® model examines relationship between an emotional connection and relational connections (Reputation Institute, 2014).

Davies et al. (2001, p. 113) developed a new formula to measure reputation which assesses both external (referred to as image) and internal (referred to as identity) elements: Reputation=f(image + identity).

Other approaches to measure corporate reputation consist of a corporate personality measure and trust-based measures (Stacks et al., 2013, p. 568). Berens and Riel (2004) identified a stream of literature that distinguishes associations based on different corporate personality traits that people attribute to companies. The personality measure is evident in Dowling's (2004, p. 203) or in Davies' et al. (2001) measurement approach.

In 2010, reputation was measured as a reflective construct in a process (Stacks et al., 2013, pp. 568 - 569). What companies do, are drivers or antecedent factors for reputation (Stacks et al., 2013, p. 569). Reputation in the eyes of stakeholders is measured with key indicators (Stacks et al., 2013, p. 569). Lastly, what stakeholders understand, determines what they do (Stacks et al., 2013, p. 569). Stacks et al. (2013, pp. 569 - 571) define effective communication, corporate capability and social responsibility as antecedents; visibility, credibility, authenticity, transparency, trust, relationship and confidence as key indicators; public supportive behaviour, beneficial outcomes, ROE, ROI, and competitive advantage as reputation outcomes.

Another framework for classifying organizational reputation constructs, their operational definitions, and measures were offered by Clardy (2012). He identified five distinctive sets of approaches to measure corporate reputation - each with its own distinctive measurement procedures.

The first set of approaches measures reputation as general knowledge or beliefs about the organization (Clardy, 2012, p. 297). This approach covers three measurement procedures - open-ended questions, belief rating scales and customer satisfaction. Reputation as evaluative judgements constitutes the second set of approaches (Clardy, 2012, p. 297). At least three general approaches to measure reputation can be found here: magazine listings like the MAC ratings, published media reports, and a scaled instrument to measure reputation (Clardy, 2012, pp. 293 - 297). Brand equity rating and Q score procedures measure reputation as brand (Clardy, 2012, pp. 293 -297). The next set - reputation as a personality - uses various personality-rating instruments to measure reputation (Clardy, 2012, pp. 293 - 297). Reputation as a financial asset is the last set of measures. This set uses different accounting or financial measures (Clardy, 2012, pp. 293 -297). Clardy (2012, p. 300) concluded that different reporting metrics have different uses, and that measures of reputation should assess both knowledge and evaluative judgements about the organization. Additionally, Ponzi et al. (2011, p. 18) identified that items measuring corporate reputation were consistently found to load on two factors - emotional appeal and cognitive components of performance.

The following Table 1 provides comparison of different approaches to measure corporate reputation. Chun's (2005) classification of measures according to the school of thoughts and Clardy's (2012) classification based on the organizational cognition were taken into consideration.

Table 1 Comparison of different measures of corporate reputation

Organizational cognition (Clardy, 2012)	School of thoughts (Chun, 2005)	Author and year	Definition	Methodology	Findings
Reputation as general knowledge or beliefs	Impressional	Bromley, 2002	Free-description method to measure corporate reputation	Open-ended questionnaire	Difference in the frequency of attribute occurrences of as an indicator of relative importance or familiarity
	Relational/ impressional	Hannington, 2004	360° study	Open-ended questionnaire	Ability to compare core groups and highlight differences between their perceptions of the organization
	Impressional	Dowling, 2004	Journalists' evaluation of corporate reputation	Open-ended questionnaire, personality scale	Importance of measuring relationship between respondents and the organization
Reputation as evaluative judgment	Impressional	Riel et al., 1998	Early professional measures	Attitude measuring scales	Little to do with corporate reputation (Stacks et al., 2013)
	Impressional	Satir, 2006	Early professional measures	Satisfaction survey	Little to do with corporate reputation (Stacks et al., 2013)
	Impressional	Fortune, 1982 (Fombrun, 1998)	The MAC survey	Ratings and rankings	List of world's 50 most admired companies
	Impressional	Asia Business (Fombrun, 1998)	Asia's most admired companies	Ratings and rankings	List of 250 Asia's largest companies
	Impressional	Far Eastern Economic Review (Fombrun, 1998)	Far East economic review	Ratings and rankings	Reputation of 200 companies operating in Far East
	Impressional	Management Today, 1989 (Fombrun, 1998)	Britain's most admired compqnies	Ratings and rankings	Annual reputation rankings of Britain's largest companies

Organizational cognition (Clardy, 2012)	School of thoughts (Chun, 2005)	Author and year	Definition	Methodology	Findings
	Impressional	Financial Times, (Fombrun, 1998)	Europe's most respected companies	Ratings and rankings	List of most respected companies in Europe
	Impressional	Fombrun et al., 2000	Reputation Quotient	Qualitative rating scales	Valid, reliable, and robust instrument for measuring corporate reputation
	Impressional	Ponzi et al., 2011	RepTrak – a short form measure	Qualitative rating scales	Updated version of Reputation Quotient
	Impressional	Stacks et al. 2013	A process view of reputation measure	Qualitative rating scales	Established linear relationship between outputs and outcomes
	Impressional	Reputation Institute, 2014	The RepTrak® Framework	Qualitative rating scales	Updated version of Reputation Quotient
Reputation as brand	Evaluative	Aaker, 1992	Managing brand equity	Free associations, sentence completion, picture interpretation,	Various methods for assessing brand information
	Evaluative	Marketing Evaluations Inc., 1960s (Clardy, 2012)	Q Score	Q score – favourability and awareness	Measure of familiarity and appeal of some a targeted referent
	Evaluative	Gaines-Ross, 1998	Leveraging corporate equity	Corporate equity ratings	Organization's overall equity score
Reputation as personality	Impressional	Davies et al., 2001	The personification metaphor	Aaker's scale	Developed scales that are of a greater effect in the fied of reputation
	Impressional	Dowling, 2004	Journalists evaluation of corporate reputations	Personality scale	Multiple indices provide an extra insight into factors driving corporate reputation.
Reputation as financial asset	Evaluative	Jackson, 2004	Reputational capital	Extended balance sheet	Reputational capital is firm's intangible long-term strategic asset

Source: self-made according to the literature review

To identify the key indicators that should guide my research, I looked into four latest and commonly used impressional measurement methods using qualitative rating scales – The RepTrak® Framework (Reputation Institute, 2014), The Process View (Stacks et al., 2013), RepTrak – a short form measure (Ponzi et al., 2011), and Reputation Quotient (Fombrun et al., 2000) – and their indicators.

While Reputation institute (2014), Ponzi et al. (2011) and Fombrun et al. (2000) consider emotional appeal as a short measure of corporate reputation and other indicators as drivers of it, Stacks et al. (2013) proposes seven drivers and seven indicators of corporate reputation.

As Stacks et al. (2013, p. 569) argue: 'there is no fine line between the reputation drivers and their indicators', some of the key drivers also serve as key indicators. In fact, Stacks' et al. (2013) drivers are to some degree similar with drivers of other scholars. It could be argued that Stacks' et al. drivers are highly correlated with their indicators. Stacks et al. (2013) defined seven indicators, but I would argue that they are rather abstract terms and they are more difficult to operationalize. In their attempts to measure these indicators, the authors often refer to other indicators and their combinations. In fact, the authors often come back to their drivers in their attempts to measure the indicators. It could be argued that Stacks et al. do not provide a clear tool for measuring these indicators. The Stacks' et al. indicators are hypothetical and were not empirically tested in the practice.

Due to an absent mechanism for measuring the indicators of corporate reputation proposed by Stacks et al., I will not include these indicators in my model. Instead, a well-accepted and empirically tested short measure of corporate reputation will be considered as an indicator of corporate reputation.

The drivers of the process view, that its indicators are based on, are easier to measure and rate by respondents. These combined with other drivers from Reputation institute (2014), Ponzi et al. (2011) and Fombrun et al. (2000) study will applied in my theoretical model.

The following table provides a comparison of the indicators from the above mentioned measurement approach. The last column indicates the selected indicators of corporate reputation that are based on the mention literature. These indicators will serve as the theoretical basis for my research. Reasoning behind my choice will be argued after Table 2.

Table 2 Comparison of corporate reputation attributes

The Process View (Stacks et al., 2013)	**The RepTrak® Framework** (Reputation Institute, 2014)	**Reputation Quotient** (Fombrun et al., 2000)	**RepTrak – a short form measure** (Ponzi et al., 2011)	**Key attributes from the literature**
Communication				Communication
Value and quality products and services	Product and services	Product and services		Product and services
leadership and management	Leadership	Vision and leadership		Leadership
Financial performance	Performance	Financial performance		Performance
Workplace environment	Workplace	Work environment		Workplace
Social responsibility and accountability	Citizenship	Social and environmental responsibility		Citizenship
	Innovation			Innovation
	Emotional appeal	Emotional appeal	Emotional appeal	Emotional appeal
	Governance			Governance

Source: self-made

The key dimensions of corporate reputation that come from literature are mentioned in Table 2. Leadership, product and services, performance, workplace and citizenship attributes are mentioned in all three measuring approaches. The communication attribute, presented only in the process view approach, was selected. This attribute was not well reflected in RepTrek framework, but it might influence corporate reputation as well. To support my speculation, I add Murray's and White's (2005, p. 5) argument that PR can enhance reputation. Government and Innovation attributes used in the RepTrek framework were selected, as they derivate from a large international comparative study

of antecedents and consequences of corporate reputation (Fombrun and Riel, 2004, p. 391). The identified attributes present dimensions, latent variables that might be used in a model measuring corporate reputation.

Once the literature about corporate reputation was reviewed and the theoretical basis for this project was described, consideration might be given to the methodology chapter.

3 Methodology

The following chapter presents the methodology chapter of this project. As there are numerous ways to approach areas under investigation, the aim of this chapter is to explain my methodological considerations behind this research.

At the beginning of this chapter, I will shortly address questions related to theory of science by describing my paradigmatic assumptions. Afterwards, I will focus my attention on a choice of methodological approaches. Lastly, in the part with methodology, I will describe methods and techniques used in this paper.

A number of well-recognized and accepted methodological views exists in the field of social sciences. Kuada (2012, p. 74) argues that most of them share similar characteristics - a subjective/objective debate. In order not to engage in a lengthy discussion of all the methodological views, I will present only one view explaining my choice of the methodological approach.

The contribution of Arbnor and Bjerke's (2009) methodological view is well recognized and tends to create knowledge particularly in the business area. According to Arbnor and Bjerke (2009, p. 12) the methodological process of creating business knowledge consists of two constructs - theory of science and methodology. The first construct - theory of science - will be used to define my basic assumptions behind this project by discussing the concept of reality, the concept of science, the scientific ideal, and ethical/aesthetical aspects (Arbnor and Bjerke, 2009, p. 16). My methodological approach and methods will be described under the second construct - methodology.

3.1 Basic assumptions

To describe my basic assumptions behind this project, I will touch upon each construct of Arbnor and Bjerke's (2009) paradigmatic concept.

3.1.1 Concept of reality

'Concept of reality has to do with philosophical ideas about how reality is constructed, whether reality exists in and of itself or through our mediation' (Arbnor and Bjerke, 2009, p. 16). I see corporate reputation as a construct consisting of fact-filled systems

structures – dimensions (indicators, drivers) of corporate reputation - in the objective reality (Arbnor and Bjerke, 2009, p. 39). These structures, however, consist of subjective opinions of those who observe the area under investigation, whereas these opinions are treated as facts (Arbnor and Bjerke, 2009, p. 39). In other words, I consider corporate reputation as an objective construct consisting of different systems that are being evaluated by creators of knowledge - the local community, from the position of external observer - and their knowledge is considered as a fact.

3.1.2 Concept of science

'Concept of science has to do with knowledge we have gained through education, which gives us our concepts of beliefs about objects and subjects we study, and our knowledge interests' (Arbnor and Bjerke, 2009, p. 16). My aim in this project is to study corporate reputation in the eyes of the local community, where the local community is considered as a whole and not looked at as isolated individuals (Arbnor and Bjerke, 2009, p. 16). My argument supports Emler's (1990, p.181) statement that reputations are social constructions, created collectively through processes of social communication, not individual judgements. This will be done by presenting generalized knowledge for the whole population by looking on a grand mean of the local community. My aim is not to create universal knowledge, but rather case specific knowledge that can be improved over time.

3.1.3 Scientific ideals

'A scientific ideal is related to the researcher as a person - an expression of something related to his/her desires' (Arbnor and Bjerke, 2009, p. 16). My aim in this project is to create knowledge constituting of both explaining factors and understanding factors.

Using understanding factors, I will create case specific knowledge - the knowledge that will help me understand how the corporate reputation of T-Systems is constituted in the eyes of the local community. I will identify patterns (dimensions) based on which the local community might judge the corporate reputation of T-Systems. This knowledge is not universal, but rather a case specific and it could be applied repeatedly (in the same context) resulting in some improvements every time.

While understanding knowledge is set in a focus, explanatory knowledge might be used while discussing findings and their possible causes.

3.1.4 Ethical and aesthetical aspects

'Ethical and aesthetical aspects have to do with what the researcher claims is morally suitable or unsuitable and claims to be beautiful or ugly' (Arbnor and Bjerke, 2009, p. 16). Even though Arbnor and Bjerke (2009, p. 39) explain that negative results are not favourable in entrepreneurship, I still find it ethical to report the transparent results. Many scholars run the analysis to find an acceptable model fit firstly. Then, they present this model as their initial model, although it has already undergone some modifications. I will not follow this trend; I will report unacceptable model fits, as well. From the aesthetical aspects on the content of the report, I will favour presenting the results in graphs, tables, or figures.

3.2 Methodology

'Methodology is the understanding of how methods are constructed, that is, how an operative paradigm is developed' (Arbnor and Bjerke, 2009, p. 17). Arbnor and Bjerke (2009, p. 17) further explain that an operative paradigm relates a methodological view to a specific study area.

Based on the previous statement, it is essential, firstly, to define the methodological view and, later on, discuss an operative paradigm. In this part of my methodology chapter, I will define the methodological approach behind this project using Arbnor and Bjerke's methodological view. Afterwards, consideration will be given to the methodological procedures and methodics used to approach the area under investigation.

3.2.1 Methodological view

Arbnor and Bjerke (2009) described three methodological views – analytical, system, and actor view - where each of them looks differently at the world we act in. Additionally, a difference between them depends on their position on the objective-subjective axis (Arbnor and Bjerke, 2009, p. 51).

The basic assumptions discussed previously serve as a starting point while defining my methodological view. The aim of this project is to define the theoretical model/ framework that could be used to measure the corporate reputation from the perspective of the local community. I am conducting the study from the position of an external researcher, thus I am not a part of neither the company nor the local community. I see the company and the local community as two different wholes that interact and influence each other. Corporate reputation is seen as reflection of past, current and future actions of the company in the eyes of the local community. Corporate reputation is seen as a construct consisting of different fact-filled structures that are reflected in different dimensions of corporate reputation. There is a reflective relationship between these structures. As corporate reputation is considered as consisting of fact-filled structures, it exists in the objective reality. I aim to find out how the company is perceived in the eyes of the local community, thus this reality is created by subjective opinions of people in the local community. As I do not look at individuals of the community, but rather at the community as a whole, these subjective opinions are presented in the form of a grand mean and considered as facts. In the light of the previous arguments, my methodological view would be the closest to the systems view defined by Arbnor and Bjerke (2009).

Once the methodological view was defined, consideration might be give to the methodological procedures and methodics.

3.2.2 Methodological procedures and methodics

The following part of the project will describe methodological procedures and methodics used to answer the problem formulation.

As Arbnor and Bjerke (2009, p. 39) suggest, my research starts with looking in existing literature in the same field. In the literature review, I looked in how scholars defined corporate reputation, how it was studied under different disciplines, and how it was measured. Arbnor and Bjerke (2009, p. 39) argue that a system does not appear overnight and it has often existed for a long time. Looking in literature of corporate reputation helps me to clarify its history, critical events, and important decisions that have been made (Arbnor and Bjerke, 2009, p. 39). The deductive approach to study the

area under investigation will be followed. Therefore, in this project I will collect data to test the proposed model for measuring corporate reputation in the eyes of the local community. The choice of this approach is based on my basic assumptions and the methodological approach discussed previously.

3.2.2.1 Application of the epistemic nature of reputation

At this place, the focus is given to construct conceptualization in terms of the epistemic nature of reputation. As I already argued, I see corporate reputation as a construct consisting of fact-filled subsystems - dimensions of corporate reputation. The structural equation models enable investigation of relationships between different constructs (Helm, 2005, p. 97). Therefore, this method of investigation will be applied in this research. Nusair and Hua (2010) state that the structural equation modelling (SEM) has recently become a popular statistical technique capable of measuring the underlying latent constructs identified by the factor analysis and assessing the path of the hypothesized relationship between the constructs.

Helm (2005, p. 97) explains that SEM contains two inter-related models - the measurement model and the structural model. *'The measurement model defines the constructs or latent variables and assigns observed variables — the indicators — to them' (Helm, 2005, p. 97). 'The structural model defines the causal relationship between the latent variables or constructs'* (Helm, 2005, p. 97; Nusair and Hua, 2010, p. 315).

While specifying the measurement model, the question of formative or reflective indicators is an issue (Helm, 2005, p. 97). The reflective research assumes that observable indicators are reflections or representations of the construct, which means that the construct should be unidimensional and the items correlated (Helm, 2005, p. 97). The researcher using formative indicators assumes that these indicators cause the latent variable and they represent different dimensions of the construct (Helm, 2005, p. 97). In this case, the construct is a summation of the observed variables with which it is associated (Helm, 2005, p. 97).

If reputation was understood as a reflective construct, this would mean that the indicators (the dimensions) are effects of a construct (Helm, 2005, p. 99). This would imply that reputation determines the quality of communication, leadership and etc.

If reputation was understood as a formative construct, this would mean that the indicators (the dimensions) were inputs for reputation. This would imply that better communication, leadership etc. would lead to better reputation.

In my research, I will consider certain indicators (the dimensions) of corporate reputation as its inputs or drivers. Additionally, the indicators of corporate reputation are built of its reflections or representations. In the light of the previous arguments, I will design my model using formative structures between the indicators of corporate reputation, where the indicators themselves are of a reflective nature.

Nusair and Hua (2010, p. 315) explain that the SEM analysis is conducted in a two-phase approach. In the first phase, a confirmatory factor analysis is used to measure adequacy of the model (Nusair and Hua, 2010, p. 315). The structural model is evaluated in the second phase (Nusair and Hua, 2010, p. 315). My intention in this project is to confirm the hypothesised relationships between the constructs. The confirmatory factor analysis will be performed to assess adequacy of the model using SPSS 22. and AMOS 22. Additionally, the structural equation modelling analysis will be performed to evaluate the model fit. However, I will not perform the additional path analysis to identify causal relationships between other latent variables as each variable might directly or indirectly influence certain other variables, too (Nusair and Hua, 2010, p. 316).

3.2.2.2 Content specification

The first issue to be considered while constructing the formative research is the content specification (Helm, 2005, p. 99; Diamantopoulos and Winklhofer, 2001, p. 271).

The content specification is *' . . . the specification of the scope of the latent variable, that is, the domain of content the index is intended to capture'* (Diamantopoulos and Winklhofer, 2001, p. 271). In other words, I need to identify the dimensions that are inputs for corporate reputation.

To propose the model for measuring the corporate reputation of T-Systems in the eyes of the local community, I will firstly review already existing literature on this topic. Furthermore, a focus group will be organized to discuss the concept and indentified dimensions of corporate reputation. By that way, I will be able to get more objective picture about the investigated area and diminish the bias connecting with subjectivity of the researcher.

The extensive literature review helped me to identify and compare major approaches measuring corporate reputation. Thanks to this comparison, I was able to identify common and well-recognized approaches to measure corporate reputation. The relevant approaches served as a basis for selecting dimensions of corporate reputation for my model. This method helped me to identify key dimensions of corporate reputation that come from literature.

A comprehensive desktop research shows that the most common measurements of corporate reputation are based on following dimensions (the attributes): communication, product and services, leadership, performance, workplace, citizenship, innovation, emotional appeal and governance.

These dimensions need to be adapted and contextualized for the purpose of this research.

'Exploratory research, which often involves qualitative methods, can be an essential first step to a more conclusive, confirmatory study by reducing the chance of beginning with an inadequate, incorrect, or misleading set of research objectives' (Babin et al., 2012, p. 137). My research can be described as confirmatory study of quantitative nature. However, as Babin et al. (2012, p. 137) propose I will start my research with organizing a small focus group that is of qualitative nature.

A group of four employees of T-Systems of a different age and expert level was interviewed during a focus group. Members were two internal communication specialists and two external communication specialists, where one of them is also responsible for corporate social responsibility. The aim of the focus group is to identify new indicators that are not covered in literature and to discuss those covered in literature.

In the first round, the group was asked to discussed questions and characteristics that they would use to make a conclusion about a company's reputation. Additionally, they were asked to discuss questions or characteristics that the local people would consider when they perceive T-Systems as reputable.

Overall, a list of 43 possible indicators was gathered. Two items were rather more important for an evaluation of competition than for an evaluation of reputation. The next two items were rather general, connected to the awareness of the company, and could be used as categorical variables for a cross analysis. Although some items overlapped, the next 35 items were loading into these six dimensions: workplace, citizenship, communication, product and service, emotional appeal and performance. The remaining four items shared some degree of similarity, but did not load to any of the dimensions. Due to their nature, the new discipline could be identified as presence on the local market.

As an outcome of the focus group, presence on the local market was a new dimension that was not included in literature, but was considered as a relevant dimension that might potentially have an impact on corporate reputation. Although this measure was targeting a different stakeholder group, the dimension of 'market presence' was present in Dowling's (2004) Journalists' Evaluation of Corporate Reputations, too.

Leadership, innovation, and governance did not load any items.

The items loaded in a product and service category were of a categorical nature with the main idea whether the respondents know T-Systems' products or not. For that reason, these items will be used as categorical variables for cross analyses.

In the second round, the group was asked to evaluate the dimensions identified from the literature as relevant or not relevant for investigating the corporate reputation of T-Systems from the perspective of the local community. The group has agreed that dimensions such as workplace, citizenship, communication, financial performance, and emotional appeal were relevant dimensions. These dimensions were loaded with some items in the first round, too. The remaining dimensions - innovation, governance, leadership, and products and services - were described as not relevant. The argument

was that the customers are BtB companies located abroad. Additionally, the local community does not come in touch with them. For that reason, it is unlikely that the local community would be able to evaluate products or innovation connected with it. The evaluation of leadership and governance would be more appropriate for the internal stakeholders than for the local community. The company does not emphasize these aspects in their external communication.

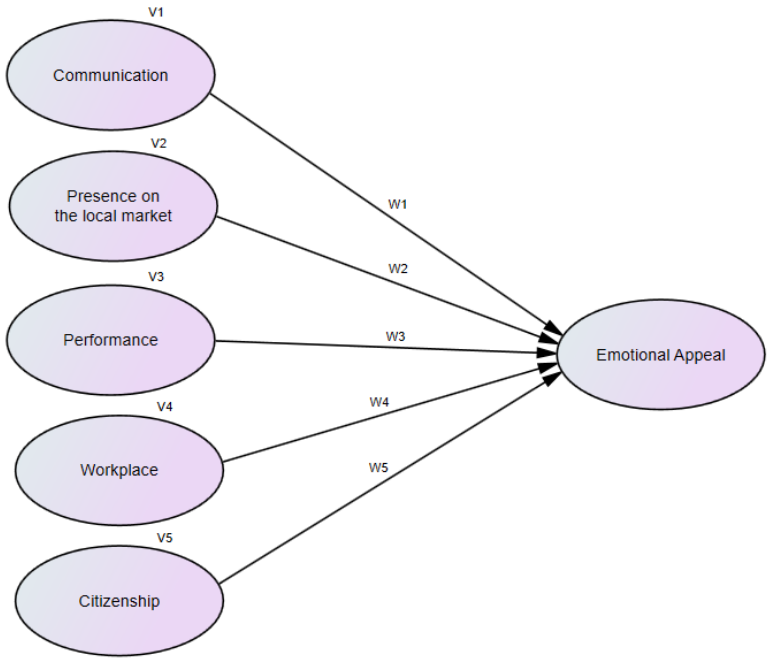
As a result of the focus group, six dimensions of corporate reputation were identified. Five dimensions are consistent with dimensions from the literature; one new dimension was identified. The final dimensions are workplace, presence on the local market citizenship, communication, financial performance, and emotional appeal.

The process view theory used to identify the key attributes of corporate reputation that come from literature assumes reflective nature of the attributes. The epistemic background of the RepTrak and the RQ theory is, however, not mentioned (Helm, 2005, p. 98). Taking into account the complex structure of both theories, it could be argued that dimensions are formative ingredients forming the construct of reputation, whereas measuring indicators are conceptualized reflectively (Helm, 2005, p. 98). Despite the reflective nature in the process view, I will consider the above-identified attributes of corporate reputation as formative indicators.

It could be argued that the identified attributes of corporate reputation load in two factors - emotional and cognitive components of corporate reputation. This characteristic is present in a number of studies (Schweiger, 2004, p. 63; Ponzi 2011; (Fombrun et al., 2000). Ponzi et al. (2011, p. 21) argues that additional analyses had suggested that non-emotional items shape or drive emotional items. That is a reason why Fombrun et al., (2000) and the Reputational Institute consider emotional items as a first-order latent variable shaped by cognitive second-order latent variables. Therefore, I will also consider the emotional appeal variable as a first-order variable and the remaining variables as second-order variables in my hypothetical model.

The proposed hypothetical model is shown in Figure 1.

Figure 1 Content specification



Source: self-made using AMOS 22.

Once the content of the proposed theoretical model for SEM analysis was specified, the attention might be given to specification of indicators.

3.2.2.3 Indicator specification

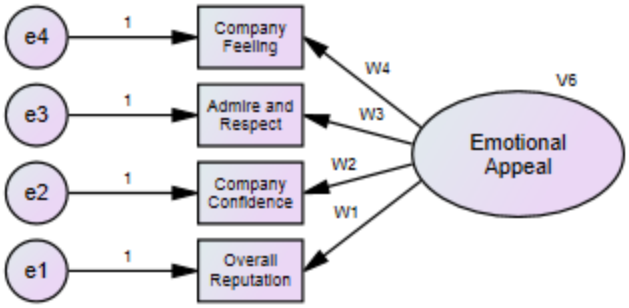
The next issue defined by Diamantopoulos and Winklhofer (2001, p. 271) is indicator specification.

The items identified by the focus group and the items from literature will serve as a basis while specifying measures of the above-mentioned indicators. As not all of the items from the focus group are equally important for measuring respective disciplines, they will be further reviewed for their relevance and overlaps.

Firstly, the dimension of emotional appeal was already well discussed in the literature. Ponzi et al. (2011) developed and validated an emotion-based measure of the corporate reputation construct. Their measure of emotional appeal is well accepted. The measure is still widely used by The Reputation Institute as Pulse Survey. For that reason, company feeling, admire and respect, company confidence and overall reputation indicators identified by Ponzi et al. (2011, p. 23) will be used to measure emotional

appeal in my research. The model of emotional appeal is shown in Figure 2, where 'w' represents factor loadings and 'v' represents variables.

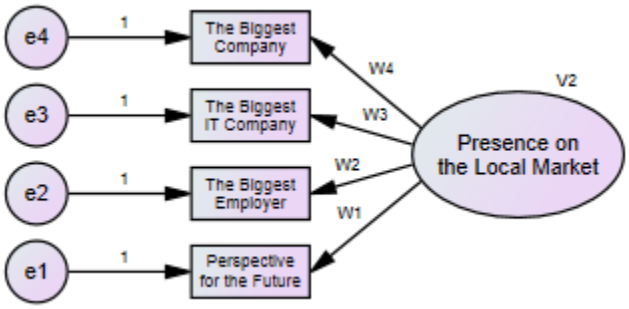
Figure 2 Emotional appeal model



Source: self-made using AMOS 22.

As for the presence on the local market variable, the items were identified thanks to the focus group. The following items will be used to measure presence on the local market: the biggest company, the biggest IT company, the biggest employer, and perspective for the future. Although T-Systems is the second biggest company and employer, and the biggest IT company in Eastern Slovakia, the purpose of this measure is to find out whether it is perceived so by the local community.

Figure 3 Presence on the local market model

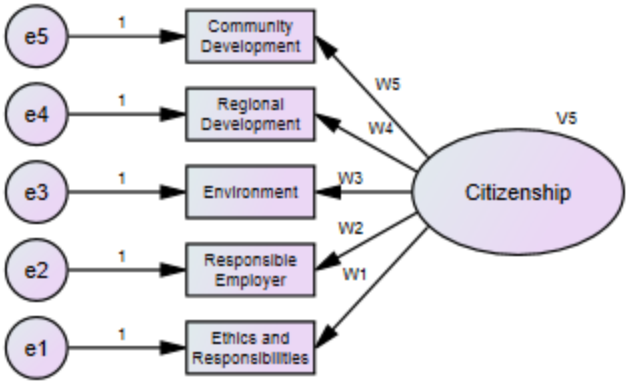


Source: self-made using AMOS 22.

The citizenship dimension was well loaded with items. However, after identifying overlaps between the items, three items referring to the local community, the region and the environment were defined. Two additional items referring to employees treatment

and ethics and responsibilities were added on top of the already mentioned items as they were present in Fombrun's et al. (2000, p. 251) research.

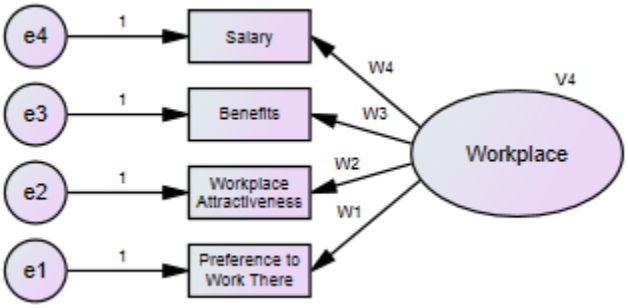
Figure 4 Citizenship model



Source: self-made using AMOS 22.

The next dimension - workplace - is built from the items identified by the focus group. They cover and even expand the items identified by Fombrun et al. (2000). The measure covers these items: salary, benefits, workplace attractiveness, and preference to work there.

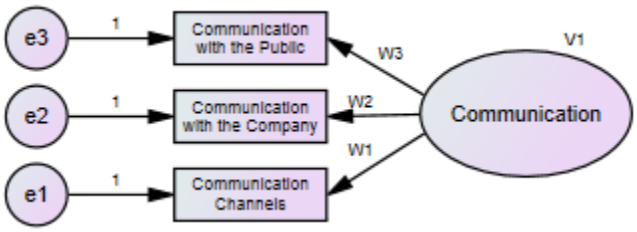
Figure 5 Workplace model



Source: self-made using AMOS 22.

Importance of the communication dimension was defended in Stacks' et al. (2013, p. 569), but the items measuring it were not recommended. Therefore, I use the items identified during the focus group to build my measure. To measure the communication I will use the following items: communication with the public, communication with the company, and communication channels.

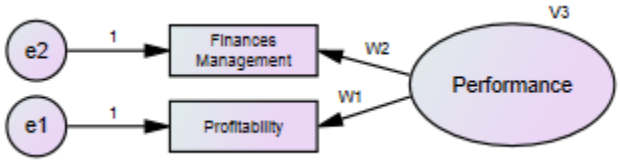
Figure 6 Communication model



Source: self-made using AMOS 22.

As for measuring the financial performance of the company, finances management and profitability items were identified. The remaining items from Fombrun's et al. (2000) measure were evaluated as not applicable in this case. Although understood as financial performance, this variable will be further referred as performance.

Figure 7 Performance model



Source: self-made using AMOS 22.

Once the indicators were specified, the next step is to choose a data collection method.

3.2.2.4 Data collection

At this place, it is the choice of data will be discussed. Babin et al., (2012, p. 161) state that the research projects often start with secondary data, because it is much faster and less expensive to obtain them.

When there is a lack of adequate secondary information, primary data need to be collected. Primary data are specifically gathered and assembled for the project at hand (Babin, 2012, p. 186.) Secondary data for the purpose of this project are not available. For that reason, primary data will be used in the project and will present the main source of data. Secondary data will be used to review current literature and to support the primary data mainly in form of demographic data about the local community.

Once the source of data was discussed, consideration might be given into its nature. Many scholars define two types of methods for gathering data - quantitative and qualitative. '*. . . qualitative researchers study things in their natural settings, attempting to make sense of, or interpret phenomena in terms of the meanings people bring to them'* (Murray, 2003, p. 1). The quantitative research, on the other hand, is based on numerical measurement of specific aspects or phenomena (Murray, 2003, p. 2). It seeks general description or tests causal hypotheses, and seeks measurements and analyses that are easily replicable (Murray, 2003, p. 2).

The choice of quantitative or qualitative methods depends on my reality presumptions. As I see the area under investigation as objective reality, I seek to gather objective, measurable, comparable, and verifiable data. Based on the previous argument, my research will be guided by quantitative methods.

'In business research, the most common method of generating primary data is the survey' (Babin et al., 2012, p. 67). Babin et al. (2012, p. 67) define the survey as a research technique in which a sample is interviewed in some form or the behaviour is observed and described in some way. As the survey provides a quick, efficient, and accurate mean of assessing information about the local community (Babin et al., 2012, p. 187), this technique will be used to interview the sample for the purpose of this project.

The self-administrated questionnaire is a survey method where the respondent takes responsibility for reading and answering questions without an interviewer's presence (Babin et al., 2012, p. 219). The self-administrated questionnaire is selected as a method for obtaining the primary data. This choice ensures the respondents objectivity and diminishes interviewer's bias. Self-administrated questionnaires can be either printed or electronic. They can be distributed in many ways. In my data collection process, I will use both paper and electronic questionnaires. By using both types of questionnaires, I can reach respondents that usually cannot be reached either way.

T-Systems with its headquarters in Kosice, operates in Kosice Region - the second largest region in Slovakia. Kosice with its 242 000 inhabitants presents the region's capital and the second biggest city in Slovakia (VUCKE, 2014). 55% of overall

population of Kosice Region live in Kosice (VUCKE, 2014). Having these statistics in mind, it would be essential to start collecting data in Kosice. Later, the collection might be extended to other places of Kosice Region or even to Presov Region where T-Systems also supports the local community. However, I limit my collection of data only to Kosice leaving the other places of Kosice Region and Presov Region for the future research, once the model was confirmed on this sample.

The paper questionnaires will be distributed personally using an in-person drop-off method (Babin et al. 2012, p. 219) on places with high density of people. The electronic questionnaires will be distributed over internet and social networks primarily to people in my network residing in Kosice Region.

The next step is to determine the sample and sampling method.

3.2.2.5 Sampling method

At this point of research, a researcher has a choice to conduct a census - to investigate all the elements of the population - or a sample - to investigate a subset or some part of a larger population (Babin et al., 2012, p. 387). Relatively big population favours a sample. For that reason, I will investigate only a small but representative sample of the population to make conclusions about the whole population.

As the T-Systems organizes events targeting population ranging from high school students to seniors, the age range is quite wide. Therefore, the population of the local community presents people living in Kosice Region from the age of 15. The exact number or the population was 655414 inhabitants on the 31st of December, 2012 (Slovak.statistics.sk, 2014).

The sampling frame includes elements like people living in Kosice Region and at the age of 15 years or more.

Once the total population and the sampling frame were defined, consideration might be given to procedures for selecting sampling units. Babin et al. (2012, p. 395) present two sampling methods - probability sampling and non-probability sampling. Probability sampling is the simple random sample in which each member of the population has equal probability of being selected (Babin et al., 2012, p. 395). On the other hand, the

selection of sampling units in non-probability sampling is arbitrary as it heavily relies on personal judgement (Babin et al., 2012, p. 395). The key characteristic of the probability sample is randomness. However, in my case it would be impossible to ensure that the respondents will be selected randomly during personal distribution of the questionnaire. For that reason, I will follow the non-probability sampling method.

The four most common non-probability sampling methods are convenience sampling, judgement sampling, quota sampling, and snowball sampling (Babin et al., 2012, p. 404). Quota sampling is a very extensively used method when the researcher classifies the population by pertinent properties and determines the desired proportion of the sample (Babin et al., 2012, p. 404). In this research, I will follow the quota sampling as it ensures that gender and age groups are represented on pertinent sample characteristics as desired (Babin et al., 2012, p. 397). Additionally, this method will help me to keep approximately the same proportions of males/females and age groups in my sample as found in the whole population ensuring objectivity of the research.

Kline (2005, p. 10) argues that structural equation modelling is still a large-sample technique, but there are some recent suggestions about smaller samples in literature. He adds that results from the larger samples have less sampling errors than within smaller samples (Kline, 2005, p. 110).

Kline (2005, p. 110) explains that in some estimation methods offered earlier the small size is with 100 cases and below, the medium size is between 100 and 200 cases and the large sample is with 200 cases and more. He recommends a realistic, desirable proportion of cases to free parameters of 10:1 (Kline, 2005, p. 111). Gagne and Hancock (2006, p. 66) explain that some researchers suggest n=100 as the lower sample size, while others suggest n=200 as the lower sample size.

My ambition is to collect around 160 cases acknowledging that there might be same degree of error in this sample.

3.2.2.6 Questionnaire design

While designing a questionnaire, consideration should be given into a degree of structure and a degree of disguise (Babin et al., 2012, p. 196). Babin et al. (2012, p.

196) suggest two types of a questionnaire - structured and unstructured. Additionally, they explain that one limitation of his classification is a hybrid questionnaire asking respondents for both structured and unstructured questions. In my questionnaire, I will combine both types of questions. Open questions will be unstructured; the closed questions will offer respondents some options. Regarding the degree of disguise, I will ask straightforward questions assuming that the respondent is willing to answer.

While a survey is often associated with quantitative findings, Babin et al. (2012, p. 186) argue that some aspects might be also qualitative. As I aim to measure and quantify certain information, I will use only quantitative questions.

The questionnaire will start with a jump question asking respondent whether they heard about the company or not. Those who heard will be asked additional questions.

Hannington (2004, p. 54) explains that the reputation survey should encourage open responses to open questions. As he suggests, the questions asking respondents about business the company operates in and the products and services it offers will be included in the questionnaire. These questions are also in a line with the questions suggested in the focus group.

Hannington (2004, p. 54) adds that tendency might be diverted into a multiple-choice optional question set. He explains that this will help to avoid highly critical and uncontrolled responses.

The next set of questions will cover 22 items identified in the indicator specification part. The questions will be evaluated on a 7-point likert scale. The likert scale will be used to indicate respondents attitude by checking how strongly they agree or disagree with 22 items. (Babin et al., 2012, p. 318). The 7-point likert scale is more likely to better reflect respondents' true subjective evaluation, and excelled better in objective accuracy, in perceived accuracy and in an ease of use evaluation than 5-point likert scale (Finstad, 2010, p. 108).

The final set of questions covers demographic questions asking for respondents' age, gender, residence, education, and occupation.

Table 3 features the overall structure of the questionnaire.

Table 3 The overall structure of the questionnaire

Question category	Scale in SPSS	Number of variables
Familiarity → dummy variable	Nominal (heard/ did not hear)	1
Awareness → dummy variable	Nominal (correct/incorrect)	2
Corporate reputation → Likert scale	Ordinal	22
Demographics	Nominal	5

Source: self-made

The following part will describe my approach to analysis.

3.2.2.7 Data analysis

The data analysis process will cover both the confirmatory factor analysis (CFA) and the structural equation modelling (SEM) analysis.

'CFA is a statistical technique used to verify the factor structure of a set of observed variables' (Suhr, unknown, p.1). The CFA tests a hypothesis that relationship between observed variables and their underlying latent constructs exists (Suhr, unknown, p.1). A clear a priori prediction about the construct is made; the hypothesized model is tested, and either accepted or rejected (Curran, 1994, p.1).

'SEM allows one latent factor to be regressed upon one or more other factors, thus providing a test of structural relationships between the factors' (Curran 1994, p.1).

3.2.2.8 Confirmatory factor analysis

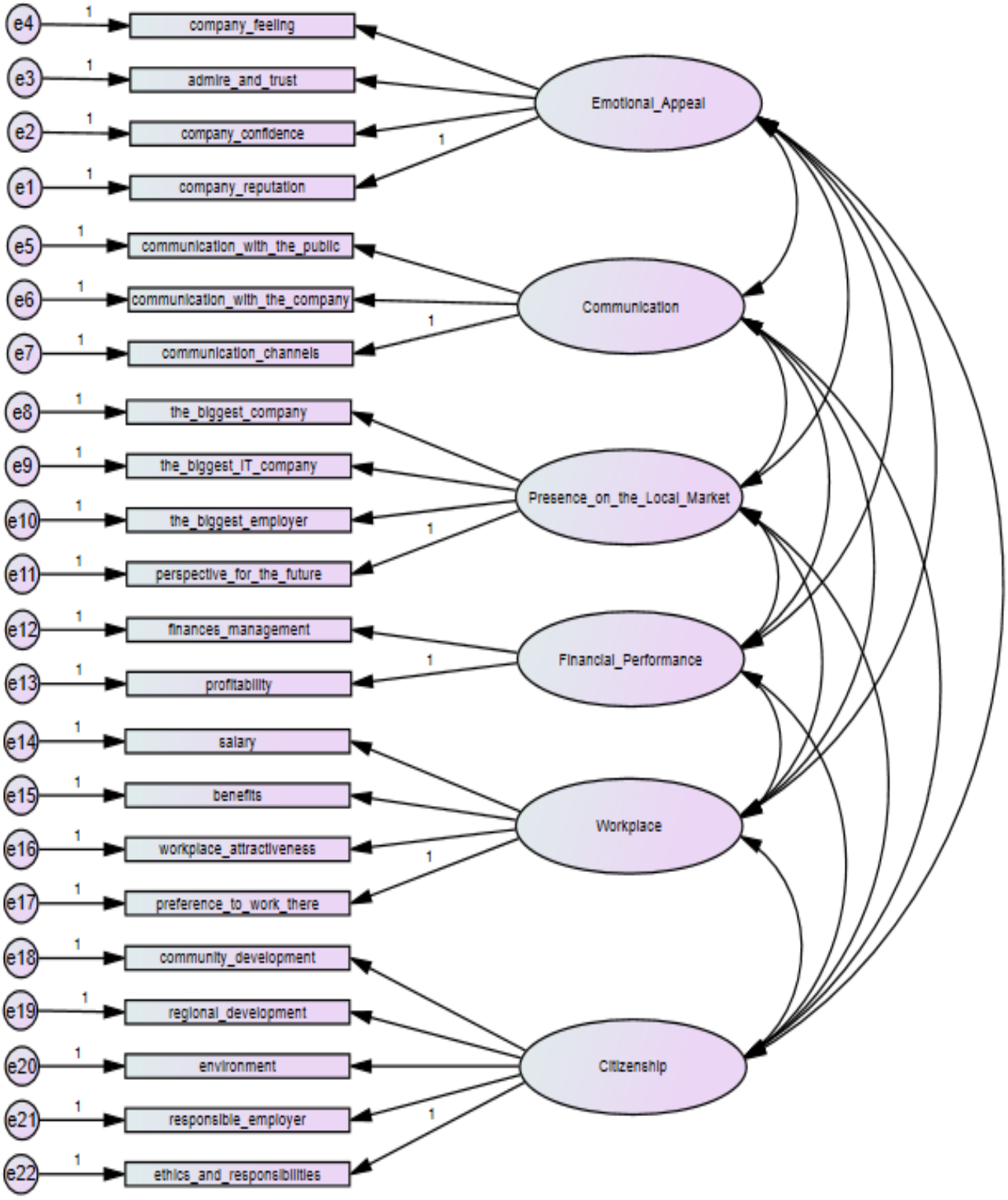
'The purpose of confirmatory factor analysis (CFA) is to statistically test the ability of the hypothesized factor model to reproduce the sampled data' (Nusair and Hua, 2010, p. 315).

Suhr (unknown, p. 1) suggests an approach to the CFA that proceeds through the following steps:

- review the relevant theory and research literature to support model specification
- specify a model
- determine model identification
- collect data
- conduct preliminary descriptive statistical analysis
- estimate parameters in the model
- assess model fit
- present and interpret the results.

The literature was already reviewed and the model was specified. The specified model is supported by the literature review as well as the focus group interviews. The model with its identifications is shown in Figure 8.

Figure 8 CFA – measurement model



Source: self-made using AMOS 22.

The analysis presumes that there is a small number of unobserved latent variables (see circles in Figure 8) which influence vast array of observed variables (see rectangles in Figure 8) (Nusair and Hua, 2010, p. 315).

Hypotheses that this CFA aims to test are consolidated and shown in Table 4.

Table 4 Hypotheses - CFA

Hypotheses for CFA	
Communication	
H1a	**Communication with the Public** variable has a positive impact on **Communication**
H1b	**Communication with the Company** variable has a positive impact on **Communication**
H1c	**Communication Channels** variable has a positive impact on **Communication**
Presence on the Local Market	
H2a	**The Biggest Company** variable has a positive impact on **Presence on the Local Market**
H2b	**The Biggest IT Company** variable has a positive impact on **Presence on the Local Market**
H2c	**The Biggest Employer** variable has a positive impact on **Presence on the Local Market**
H2d	**Perspective for the Future** variable has a positive impact on **Presence on the Local Market**
Financial Performance	
H3a	**Finances Management** variable has a positive impact on **Financial Performance**
H3b	**Profitability** variable has a positive impact on **Financial Performance**
Workplace	
H4a	**Salary** variable has a positive impact on **Workplace**
H4b	**Benefits** variable has a positive impact on **Workplace**
H4c	**Workplace Attractiveness** variable has a positive impact on **Workplace**
H4d	**Preference to Work There** variable has a positive impact on **Workplace**
Citizenship	
H5a	**Community Development** variable has a positive impact on **Citizenship**
H5b	**Regional Development** variable has a positive impact on **Citizenship**
H5c	**Environment** variable has a positive impact on **Citizenship**
H5d	**Responsible employer** variable has a positive impact on **Citizenship**
H5e	**Ethics and Responsibilities** variable has a positive impact on **Citizenship**
Emotional Appeal	
H6a	**Company Feeling** variable has a positive impact on **Emotional Appeal**
H6b	**Admire and Respect** variable has a positive impact on **Emotional Appeal**
H6c	**Company Confidence** variable has a positive impact on **Emotional Appeal**
H6d	**Overall Reputation** variable has a positive impact on **Emotional Appeal**

Source: self-made

Once data are collected, I will process with editing them. As all the answers must be supplied to proceed to the next question in an online questionnaire, the questionnaire is less vulnerable to filling error. In the case that a paper questionnaire has more than a quarter of responses missing, it is dropped from the sample (Babin et al., 2012, p.467).

Otherwise, the missing variables will be treated as neutral answers, thus assigning them a value of 4, which is in the middle of the 7-point likert scale.

In the next step, the paper questionnaires will be transferred to a computer using a coding scheme. Afterwards, the right measure will be assigned to each variable in SPSS. Table 3 shows assigned scales for each variable.

In the next step, assumptions for collinearity, outliers, and multivariate normality are checked using SPSS (Diamantopoulos and Winklhofer, 2001, p. 271; Nusair and Hua, 2010, p. 318).

Once the parameters in the model are estimated, the model fit will be evaluated in AMOS 22. using several measures of goodness-of-fit indices. After achieving adequate overall fit indices, the measurement model will be further evaluated for its reliability, convergent validity, and discriminant validity as suggested by Nusair and Hua (2010, p. 318).

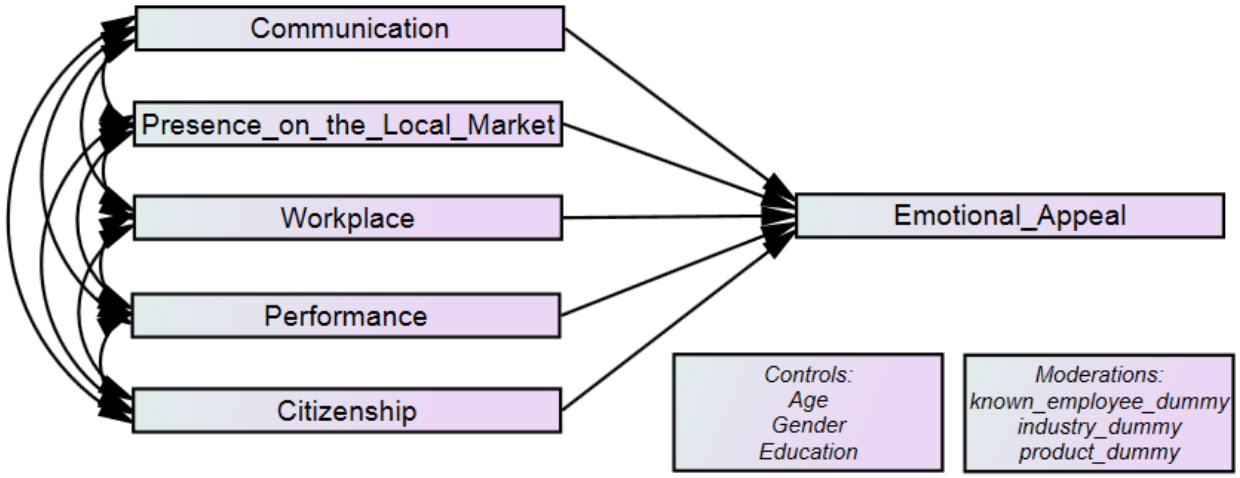
The analysis proceeds with the SEM and the structural model.

3.2.2.9 Structural equation modelling

Once my measurement model was confirmed, I proceed with evaluating the structural model. The following SEM analysis will test structural relationships between the latent variables. My structural model derives from the assumption that Emotional Appeal is a first-order variable, while the remaining variables are second-order variables. The proposed SEM model will be moderated by known_employee_dummy, industry_dummy and product_dummy. The model will be controlled for age, gender, and education

The structural model is shown in Figure 9.

Figure 9 SEM – structural model



Source: self-made using AMOS 22.

Based on the previous model, hypotheses are defined.

The hypotheses are consolidated in Table 5 so the cognitive load for the reader is diminished.

Table 5 Hypotheses - SEM

	Hypotheses for SEM:
H7a	**Communication** positively effects **Emotional Appeal**
H7b	The positive effect of Communication on Emotional Appeal exists regardless of age.
H7c	The positive effect of Communication on Emotional Appeal exists regardless of **gender.**
H7d	The positive effect of Communication on Emotional Appeal exists regardless of **education.**
H7e	**Known_employee_dummy** positively and fully mediates relationship between Communication and Emotional Appeal.
H7f	**Industry_dummy** positively and fully mediates relationship between Communication and Emotional Appeal.
H7g	**Product_dummy** positively and fully mediates relationship between Communication and Emotional Appeal.
H8a	**Presence on the Local Market** positively effects **Emotional Appeal**
H8b	The positive effect of Presence on the Local Market on Emotional Appeal exists regardless of **age**.
H8c	The positive effect of Presence on the Local Market on Emotional Appeal exists regardless of **gender.**
H8d	The positive effect of Presence on the Local Market on Emotional Appeal exists regardless of **education.**
H8e	**Known_employee_dummy** positively and fully mediates relationship between Presence on the Local Market and Emotional Appeal.
H8f	**Industry_dummy** positively and fully mediates relationship between Presence on the Local Market and Emotional Appeal.

	Hypotheses for SEM:
H8g	**Product_dummy** positively and fully mediates relationship between Presence on the Local Market and Emotional Appeal.
H9a	**Financial Performance** positively effects **Emotional Appeal**
H9b	The positive effect of Financial Performance on Emotional Appeal exists regardless of **age**.
H9c	The positive effect of Financial Performance on Emotional Appeal exists regardless of **gender.**
H9d	The positive effect of Financial Performance on Emotional Appeal exists regardless of **education.**
H9e	**Known_employee_dummy** positively and fully mediates relationship between Financial Performance and Emotional Appeal.
H9f	**Industry_dummy** positively and fully mediates relationship between Financial Performance and Emotional Appeal.
H9g	**Product_dummy** positively and fully mediates relationship between Financial Performance and Emotional Appeal.
H10a	**Workplace** positively effects **Emotional Appeal**
H10b	The positive effect of Workplace on Emotional Appeal exists regardless of **age**.
H10c	The positive effect of Workplace on Emotional Appeal exists regardless of **gender.**
H10d	The positive effect of Workplace on Emotional Appeal exists regardless of **education.**
H10e	**Known_employee_dummy** positively and fully mediates relationship between Workplace and Emotional Appeal.
H10f	**Industry_dummy** positively and fully mediates relationship between Workplace and Emotional Appeal
H10g	**Product_dummy** positively and fully mediates relationship between Workplace and Emotional Appeal
H11a	**Citizenship** positively effects **Emotional Appeal**
H11b	The positive effect of Citizenship on Emotional Appeal exists regardless of **age**.
H11c	The positive effect of Citizenship on Emotional Appeal exists regardless of **gender.**
H11d	The positive effect of Citizenship on Emotional Appeal exists regardless of **education.**
H11e	**Known_employee_dummy** positively and fully mediates relationship between Citizenship and Emotional Appeal.
H11f	**Industry_dummy** positively and fully mediates relationship between Citizenship and Emotional Appeal.
H11g	**Product_dummy** positively and fully mediates relationship between Citizenship and Emotional Appeal.

Source: self-made

The hypotheses will be testes in AMOS 22. by looking at several indices of the goodness-of-fit tests. The model fit will be either accepted or rejected. Other relationships than those proposed in the SEM model will not be investigated, leaving a room for the future research.

4 Analysis

The analysis begins with descriptive statistics and proceeds with the SEM analysis. Data were analyzed using the statistical software SPSS 22. and AMOS 22.

4.1 Sample situation - descriptive statistics

Once the methodology for the project was defined, I can proceed with data collection and data analysis. Data were collected in a period of one week on the main street in the city during lunchtime as well as during evening hours. Additionally, online distribution of the questionnaire was used to collect more responses. Overall, 184 responses were gathered, whereas 43 responses were collected through the internet and remaining 141 responses were collected on the street.

During the data screening process, eight responses were deleted as they had more than a quarter of the responses missing. One additional case was deleted as it had unengaged responses, meaning that all the variables were rated with the same value. After the data screening process, 175 responses were left. The characteristics of the sample are shown in Table 6 and Table 7.

Table 6 General characteristics of the sample

General characteristics of the sample			
Variable	**Value**	**Frequency**	**Percent**
familiarity_dummy	0 no	19	10,9%
	1 yes	156	89,1%
employee_dummy	0 no	175	100%
	1 yes	0	0%
known_employee_dummy	0 no	61	34,9%
	1 yes	114	65,1%
industry_dummy	0 incorrect	69 out of 156	44,2%
	1 correct	87 out of 154	55,8%
product_dummy	0 incorrect	88 out of 154	56,4%
	1 correct	66 out of 154	43,6%

Source: data

From the previous table it could be seen that 19 out of 175 respondents did not hear about T-Systems. Their cases did not qualify for the structural equation modelling analysis as they are not able to rate the other variables. Therefore, only 156 remaining cases will be used in the SEM analysis. Additionally, the company does not employ any of the respondents. It was an intention to get responses only from people who do not work at T-Systems. 61 respondents know an employee of T-Systems. The respondents were asked to write down an industry where the company operates in, and products and services it sells. 87 respondents out of all of those who heard about T-Systems wrote the correct industry. The remaining respondents wrote either an incorrect answer or left the question unanswered. As regarding the products and services, only 87 respondents provided the correct answer. The last three variables mentioned in the table - known_employee_dummy, industry_dummy, product_dummy - could be used as controllers in a multigroup moderation in the SEM. Thus, it could be analyzed, whether the proposed hypothetical model looks the same for each group of these variables.

Table 7 Demographic characteristics of the sample

Demographic characteristics of the sample			
Variable	**Value**	**Frequency**	**Percent**
Age	15 - 19 years	25	14,3%
	20 - 24 years	55	31,4%
	25 - 29 years	32	18,3%
	30 - 34 years	14	8%
	35 - 39 years	14	8%
	40 - 44 years	13	7,4%
	45 - 49 years	7	4%
	50 - 54 years	2	1,1%
	55 - 59 years	4	2,3%
	60 - 64 years	4	2,3%
	65 - 69 years	4	2,3%
	70 years and more	1	0,6%
Gender	Female	77	44%
	Male	98	56%
Residence	Kosice City district	98	56%
	Kosice Suburbs district	47	26.9%
	SNV district	2	1.1%
	Trebisov district	11	6.3%
	Gelnica district	0	0%
	Michalovce district	2	1.1%
	Roznava district	1	0.6%
	Sobrance district	1	0.6%
	Other district	13	7.4%
Education	Elementary	14	8%
	High school	71	40.6%
	Undergraduate	41	23.4%
	Postgraduate	47	26.9%
	PhD.	2	1.1%
Occupation	Student	73	41.7%
	Unemployed	11	6.3%
	Employed	68	38.9%
	Self-employed	16	9.1%
	Retired	7	4.0%

Source: data

Table 7 shows the demographic characteristics of the sample. It could be seen that the sample is dominated by young people (from the age of 15 until 29 years). Even though these age groups of respondents do not correspondent with the biggest age groups of the whole population, it could be argued that young people are more willing to take a questionnaire. As they are most likely students themselves or were student few years

ago, they understand the role of a questionnaire and want to help with the research. On the other hand, older people might refuse to fill the questionnaire as they lack trust. Furthermore, there are more males than females in the sample. Most of the respondents are from Kosice City District, where the research was conducted. High school graduates and employed respondents dominate the sample. These demographic variables might be used to compare the sample with the real population. Additionally, demographic variables could be used in a cross-analysis, where the aim would be to find out whether the model looks similar for different groups of a variable.

In the next step, normality of 156 responses that will be used in the SEM analysis is checked. As I use the 7-point likert scale, skewness is not an issue as the responses are within the range of seven values. Therefore, the normality of data will be evaluated on a kurtosis principle only. Table 8 shows the variables with higher kurtosis value than absolute one.

Table 8 Kurtosis

Kurtosis						
	preference_to_work_there	**age**	**gender**	**residence**	**education**	**occupation**
Kurtosis	-1.412	1.502	-1.908	3.299	-1.020	-1.058

Source: SPSS

As it might be seen, the following variables reported the kurtosis value higher that absolute one: preference_to_work_there, age, gender, residence, education, and occupation. All of these variables might have a kurtosis issue. Positive values indicate that respondents answered the questions fairly similarly, while negative values indicate differences in the responses. The Residence variable reported the value of 3,3 which is significantly higher than the other values. This variable is highly kurtosed as the research was conducted in Kosice City District where most of the respondents come from. Therefore, this kurtosis could be expected. As gender has only two groups (males,females), the kurtosis is not an issue in this variable. The remaining variables reported values below two, therefore, the kurtosis is not so big. I proceed without deleting any variable.

4.2 The structural equation modelling (SEM) analysis

The SEM analysis begins with the confirmatory factor analysis (CFA), where the measurement model fit is assessed, and proceeds with the evaluation of the structural model.

4.2.1 The confirmatory factor (CFA) analysis - the measurement model

'CFA is a statistical technique used to verify the factor structure of a set of observed variables' (Suhr, unknown, p.1).

Once ensured that the scale is reliable, construct validity can be checked. The scale reliability is checked in SPSS. Table 9 shows the results of the test.

Table 9 Reliability of measures

Factor	Number of variables	Cronbach's alpha reliability
Presence on the local market	4	0,822
Citizenship	5	0,875
Workplace	4	0,791
Performance	2	0,7
Communication	3	0,89
Emotional Appeal	4	0,93

Source: SPSS 22

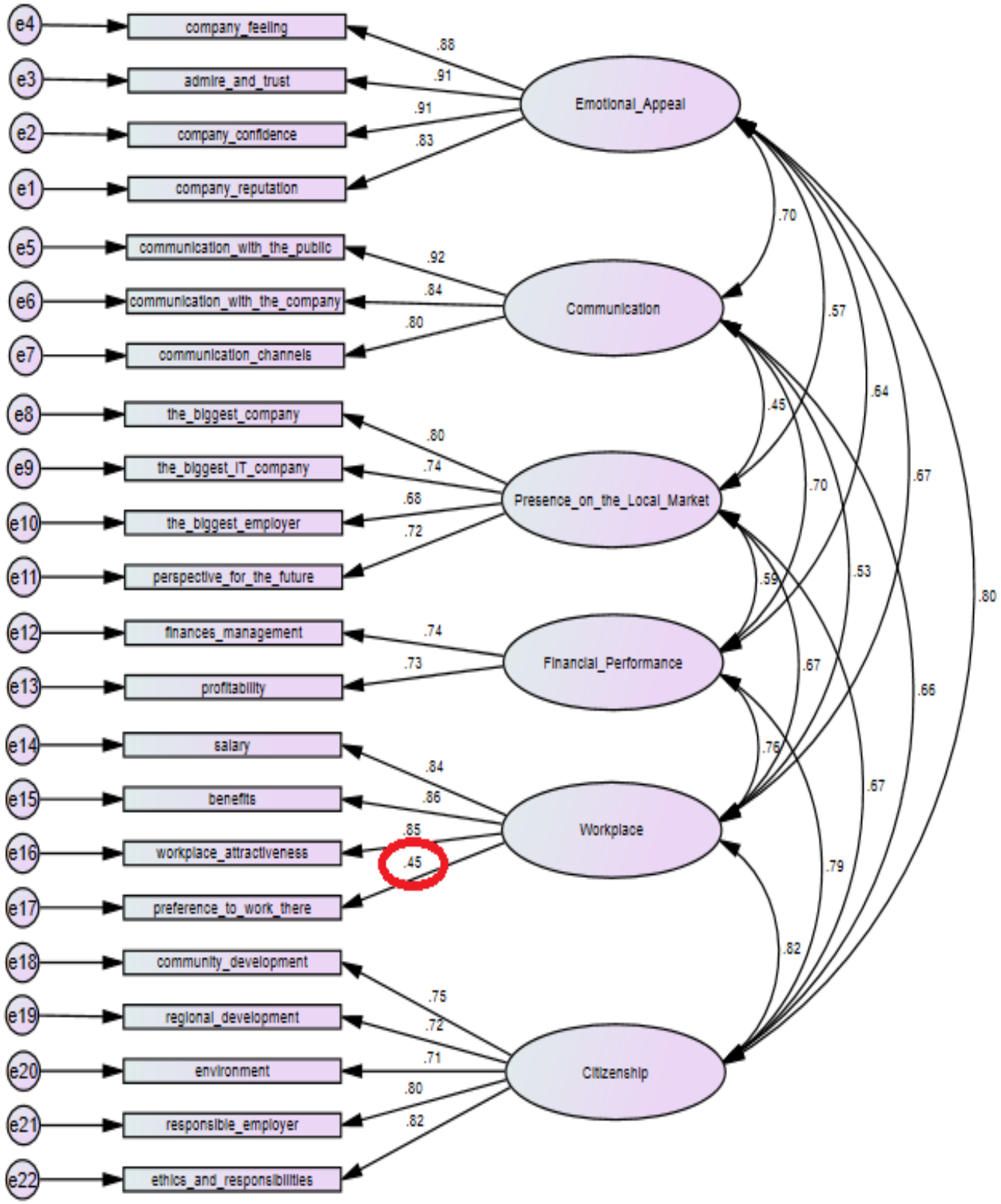
Tavakol and Dennick (2011, p. 54) suggest acceptable values of alpha, ranging from 0,7 to 0,95. The performance variable reached the lowest acceptable value. The reason for it could be a low number of items loading into this construct (Tavakol and Dennick, 2011, p. 54). Overall, all the values are acceptable, what indicates internal consistency for our scale with the sample. As such, no variables are dropped from the model, and I can proceed with the model fit evaluation.

Widaman and Thompson (2003, pp. 17 - 19) propose several indices of the goodness of fit of model to data. The likelihood ratio chi-square statistics is the first fit index evaluated and reported by most investigators. CMIN/DF (x^2/df) value from AMOS 22. is be reported. This indicia is used to test the fit of model in which minimum discrepancy (maximum likelihood estimation chi-square) is divided by its degree of freedom. The

ratio of x^2/df for an ideal model is unity (value 1) (Widaman and Thompson, 2003, p. 21). Kline (1998) argues that values of x^2/df less than 3 are desirable. The next fit indices are practical fit indices - the root-mean-square error of approximation (RMSEA) and the centrality index (CI). As AMOS 22. calculates the RMSEA value, RMSEA will be used to assess the practical fit of the model. The cutoff value close to 0,06 for RMSEA is needed to conclude a relatively good model fit (Hu and Bentler, 1999, p. 1). The last set of indices covers incremental fit indices (Widaman and Thompson, 2003, p. 18). These are Tucker–Lewis Index (TLI) also called the nonnormed fit index (NNFI), an adjustment to the TLI called the relative fit index (RFI), the normed fit index (NFI), a modification of the NFI termed the incremental fit index (IFI), the relative noncentrality index (RNI), and the comparative fit index (CFI) (Widaman and Thompson, 2003, p. 18). RNI and CFI present combined indices of the same type (Hu and Bentler, 1999, p. 24). To report about the incremental model fit, I will use TLI RFI NFI IFI CFI. While Hu and Bentler (1999, p. 4) argue that values above 0,9 of TLI, RFI, NFI, IFI, and CFI are needed for an acceptable model fit, Widaman and Thompson (2003, pp. 21 - 22) and Marsh et al. (2004, p. 323) argue for a value above 0.95.

After drawing the model in AMOS 22. and running the tests, I get the first results.

Figure 10 Initial measurement model



Source: Amos 22.

The first visual inspection of values of factor loadings suggests a low factor loading for the preference_to_work_there item. Marcoulides (1998, p. 325) suggests that standardized loadings should be greater than 0,707, but loadings of 0,5 and 0,6 may be still acceptable if there exist additional indicators in the block of a comparison basis. As the item reported a kurtosis issue, the low factor loading for this item could be expected. The remaining items reported acceptable factor loading above the value of 0,707.

Table 10 Initial model fit indices

Fit Index		**Practical Fit Indicies**		**Incremental Fit Indices**									
CMIN/DF		**RMSEA**		**TLI**		**RFI**		**NFI**		**IFI**		**CFI**	
Desired	Actual	Desired	Actual	Desired	Actual	Desired	Actual	Desired	Actual	Desired	Actual	Desired	Actual
<0,3	2,57	<0,06	0,1	>0,9	0,85	>0,9	0,78	>0,9	0,82	>0,9	0,88	>0,9	0,88

Source: AMOS 22.

Looking at the initial model fit indices in Table 10, it can be seen that only CMIN/DF indicator reached the desired value. As the remaining values are away from the desired level, the overall model fit could be assessed as not acceptable. Therefore, some model modifications might be needed.

Table 11 Modification indices with a threshold for modification indices of 20

			M.I.	**Par Change**
e19	<-->	e18	47.627	.602
e10	<-->	e8	22.999	.546
e15	<-->	e14	27.534	.306
e1	<-->	Emotional_Appeal	20.133	-.231

Source: AMOS 22.

The modification indices table in AMOS 22. shown in Table 11 suggest four modifications - covariances between exogenous variables. As e19 and e18, e10 and e8, and e15 and e14 are errors on the same factor, they will be correlated. Thus, community_development and regional_development, salary and benefits, and the_biggest_company and the_biggest_IT_company were correlated to modify the initial model. The error cannot be correlated with an unobserved variable, therefore the last modification indicia was not accepted. Additionally, the preference_to_work_there item was removed from the model as it reported low factor loading.

Table 12 First modified model fit Indices

Fit Index		**Practical Fit Indicies**		**Incremental Fit Indices**									
CMIN/DF		**RMSEA**		**TLI**		**RFI**		**NFI**		**IFI**		**CFI**	
Desired	Actual	Desired	Actual	Desired	Actual	Desired	Actual	Desired	Actual	Desired	Actual	Desired	Actual
<0,3	1,89	<0,06	0,76	>0,9	0,92	>0,9	0,85	>0,9	0,88	>0,9	0,94	>0,9	0,94

Source: AMOS 22.

After the first modification attempt, it could be seen in Table 12 that the indices improved. CMIN/DF, TLI, IFI and CFI reached the desired values. RMSEA, RFI and NFI are close to the desired values. The next step is to lower the threshold for modification indices to five.

Table 13 Modification indices with a threshold for modification indices of 5

			M.I.	**Par Change**
e20	<-->	Workplace	7.506	-.183
e21	<-->	Presence_on_the_Local_Market	5.198	-.160
e21	<-->	Workplace	13.344	.214
e9	<-->	e8	11.905	.332
e15	<-->	Emotional_Appeal	6.180	-.115
e15	<-->	e8	11.478	.229
e16	<-->	e22	8.808	-.163
e16	<-->	e21	10.699	.185
e16	<-->	e10	5.427	.174
e5	<-->	e14	5.335	.123
e5	<-->	e15	5.610	-.118
e6	<-->	e14	6.129	-.144
e6	<-->	e15	5.087	.123
e7	<-->	e8	9.086	.243
e4	<-->	Communication	8.470	.146
e4	<-->	e9	7.155	.178
e4	<-->	e10	7.602	-.193
e3	<-->	Communication	11.126	-.157
e3	<-->	e9	7.702	-.173
e2	<-->	Emotional_Appeal	7.644	.101
e2	<-->	e3	11.577	.114
e1	<-->	Communication	6.050	.141
e1	<-->	Emotional_Appeal	20.088	-.226
e1	<-->	e2	5.978	-.103

Source: AMOS 22.

Table 13 suggests further model modifications. The modification indices values above 10 will be taken into consideration. The values suggest that additional modifications might be considered between: e2 and e3, and e9 and e8. These errors are correlated. The remaining indices were refused, as the errors did not load to the same factor. After the errors were correlated, the new values for the model fit were achieved.

Table 14 Second modified model fit indices

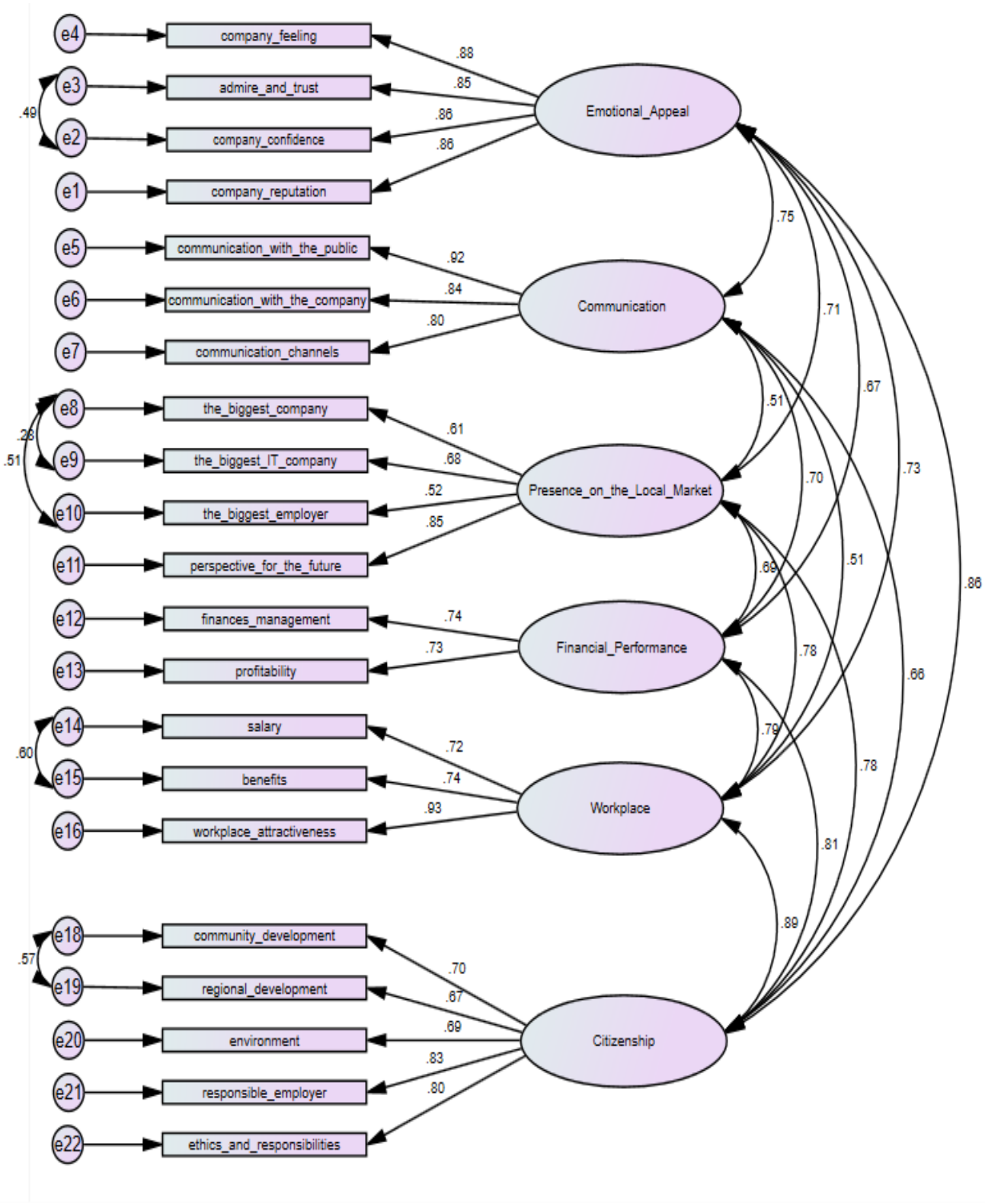
Fit Index		**Practical Fit Indicies**		**Incremental Fit Indices**									
CMIN/DF		**RMSEA**		**TLI**		**RFI**		**NFI**		**IFI**		**CFI**	
Desired	Actual	Desired	Actual	Desired	Actual	Desired	Actual	Desired	Actual	Desired	Actual	Desired	Actual
<0,3	1,7	<0,06	0,067	>0,9	0,94	>0,9	0,87	>0,9	0,89	>0,9	0,95	>0,9	0,95

Source: AMOS 22.

As it could be seen from the results in Table 14, an acceptable model fit was achieved in CMIN/DF, TLI, IFI, and CFI indicators. CFI and IFI values even reached the desired level of 0,95 as it was argued by Widaman and Thompson (2003, pp. 21 - 22) and Marsh et al. (2004, p. 323). It could be argued that RMSEA, RFI and NFI indices are close to the desired values. Mars et al. (2004, p. 325) explains that according to his experience, it is almost impossible to get an acceptable fit. Taking into consideration that four indices reached the desired values and three indices are very close to the desired values, I consider this model as good enough. All the fit indices for the modified CFA model in Table 14 indicate an acceptable fit.

The modified model is shown in Figure 11.

Figure 11 Modified measurement model



Source: AMOS 22.

The next step in the CFA analysis is the invariance test. The results of the questionnaire might be compared between different groups of individuals. In this case, the results might be compared between two groups of respondents in these categorical variables: known_employee_dummy, industry_dummy and product_dummy. While comparing the groups an assumption is made that the instrument measures the same construct in all groups (Milfont and Fischer, 2010, p. 11). *'If this assumption holds, the comparisons are valid and differences/similarities between groups can be meaningfully interpreted'* (Milfont and Fischer, 2010, p. 11).

The hypotheses that are being tested in this step are:

- The hypothesized model is identically specified across groups of respondents who know an employee of T-Systems and those who do not know.
- The hypothesized model is identically specified across groups of respondents who know the industry where T-Systems operates in and those who do not know.
- The hypothesized model is identically specified across groups of respondents who know the products of T-Systems and those who do not know.

Byrne (2004, p. 279) and Gaskin (2012) suggest to start the test with the configural invariance test - testing of validity of the hypothesized model across the groups. The aim of this step is to test if the factor structure represented in the CFA achieves an adequate fit when the groups are tested together and freely (Gaskin, 2012). The former test was conducted for each group separately; tests for validity of the factorial structure in this instance are conducted across two groups (Byrne, 2004, p. 279).

Table 15 Invariance model fit indices

Invariance	**Fit Index**	**Practical Fit Indicies**	**Incremental Fit Indices**				
	CMIN/DF	**RMSEA**	**TLI**	**RFI**	**NFI**	**IFI**	**CFI**
Known_employee_dummy	1,8	0,07	0,87	0,75	0,8	0,9	0,89
Industry_dummy	1,68	0,066	0,89	0,77	0,82	0,92	0,91
Product_dummy	1,65	0,065	0,89	0,77	0,81	0,92	0,92

Source: Amos 22.

Table 15 shows the results of the invariance model fit test across three categorical variables. Although three indices for each test are somewhat less than the

recommended cutoff criterion of 0,9 recommended by Hu and Bentler (1999), the models still represent a good fit across the two groups. As I achieve good model fits, the groups are equivalent with regard to the factor structure. The configural invariance was achieved.

In the next step, Byrne (2004, p. 279) proceeds with a test of invariance of the items across groups. This is done by performing a chi-square difference test on the two groups (Gaskin, 2012). To perform this test, I typed the results of Chi-square of an unconstrained and a fully constrained model into Stats Tool Package 1 developed by Gaskin (2012). The results are shown in Table 16.

Table 16 Metric invariance summary

Variable	Chi-square	df	Chi-square	df	Δ Chi-square	Δ df	p-val
	Unconstrained		Fully constrained				
Known_employee_dummy	617.97	338	641.72	359	23.75	21	0.305
Industry_dummy	567.5	338	587.78	359	20.28	21	0.504
Product_dummy	556.6	338	567.8	359	11.2	21	0.959

Source: AMOS and Stats Tool Package 1

Gaskin (2012) explains that significant values indicate differences between the groups. As I reached non-significant results (p-values above 0,05), my groups are invariant. Therefore, the tested hypotheses are accepted - the hypothesized model is identically specified across groups of categorical variables.

While checking for convergent and discriminant validity, few issues occurred.

Table 17 Validity and reliability test

	CR	AVE	MSV	ASV
Emotional_Appeal	0.921	0.745	0.733	0.555
Communication	0.890	0.730	0.564	0.403
Presence_on_the_Local_Market	0.766	0.458	0.615	0.490
Financial_Performance	0.700	0.539	0.653	0.535
Workplace	0.845	0.647	0.801	0.565
Citizenship	0.858	0.548	0.801	0.648

Source: AMOS 22. and Stats Tool Package 1

Table 18 Disciminant validity matrix

	Emotional_Appeal	Communication	Presence_on_the_Local_Market	Financial_Performance	Workplace	Citizenship
Emotional_Appeal	0.863					
Communication	0.751	0.854				
Presence_on_the_Local_Market	0.706	0.513	0.677			
Financial_Performance	0.668	0.697	0.685	0.734		
Workplace	0.731	0.514	0.777	0.787	0.805	
Citizenship	0.856	0.663	0.784	0.808	0.895	0.741

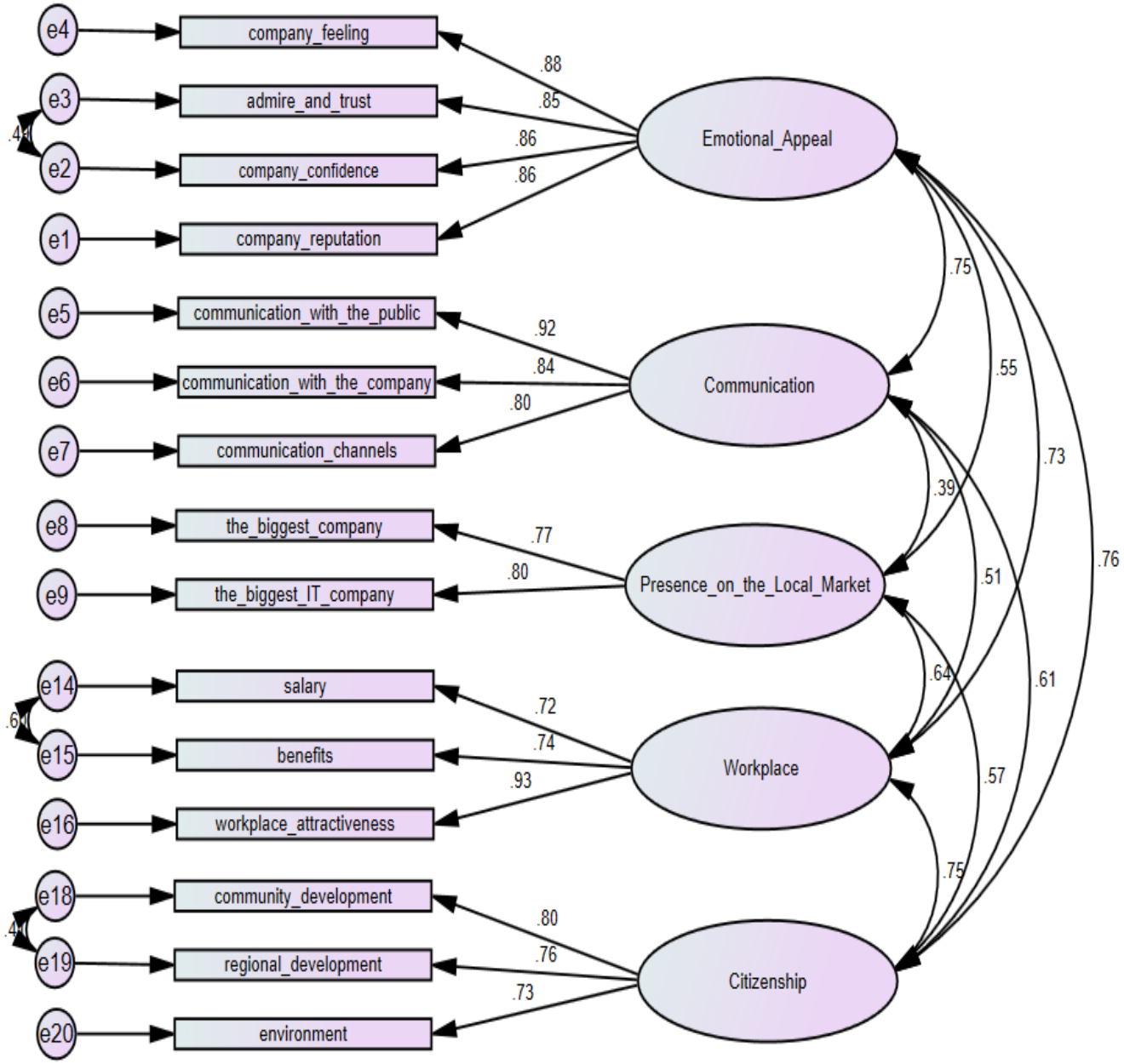
Source: AMOS 22. and Stats Tool Package 1

The average variance extracted value (AVE) shown in Table 17 should not be below 0,5 for a construct (Hair et al., 1998). As it might be seen from the Table 17, the presence_on_the_market variable has AVE below 0,5. To deal with this issue, the the_biggest_employer item was deleted as it had the lowest value of factor loading (0,52). This change solved the convergent validity issue. After this step, a reliability issue for the performance variable occurred. As minimum of two items loading to a factor are required, the whole variable was deleted from the model.

It could be seen form Table 18 that presence_on_the_local_market, workplace and citizenship have discriminant validity issues. The highest covariance of 0,9 was reported for workplace and citizenship. To deal with this issue, I performed the factor analysis in SPSS 22. and removed from the model responsible_employer and ethics_and_responsibilities as these items were loading into two factors. By that way, the discriminant validity issue of workplace was solved. As the covariance between citizenship and presence_on_the_local_market was the highest in a new model, the factor analysis with these two factors was performed in SPSS. The factor analysis revealed that perspective_for_the_future was loading into both factor. For that reason this item was deleted from the model. As there were left only two items loading to presence_on_the_local_market, the covariance between them could not be possible. After this step, all reliability and validity issues were solved.

At the end of the model modifications, the overall model fit was evaluated. Additionally, construct reliability and validity were reported. Figure 12 shows the final CFA model.

Figure 12 Final measurement model



Source: AMOS 22.

Table 19 Final model fit indices

Fit Index		Practical Fit Indicies		Incremental Fit Indices									
CMIN/DF		RMSEA		TLI		RFI		NFI		IFI		CFI	
Desired	Actual	Desired	Actual	Desired	Actual	Desired	Actual	Desired	Actual	Desired	Actual	Desired	Actual
<0,3	1,96	<0,06	0,079	>0,9	0,94	>0,9	0,89	>0,9	0,92	>0,96	0,95	>0,9	0,96

Source: AMOS 22.

The model fit indices in Table 19 indicate an acceptable model fit. CMIN/DF, TLI, NFI, IFI and CFI are above the desired value of 0,9 as proposed by Hu and Bentler (1999, p. 4). CFI and IFI even reach the value of 0,95 proposed by Widaman and Thompson (2003, pp. 21 - 22). RMSEA and RFI values are close to the desired values.

Table 20 Measurement model results

Construct	Item	St. loading	Regression weights*	S.E*	Construct reliability	AVE
Emotional_Appeal	company_reputation	0,86	1		0,92	0,75
	company_confidence	0,86	0.905	0.069		
	admire_and_trust	0,85	0.988	0.075		
	company_feeling	0,88	1.004	0.073		
Communication	communication_channels	0,80	1		0,89	0,73
	communication_with_the_company	0,84	1.096	0.094		
	communication_with_the_public	0,92	1.229	0.099		
Workplace	workplace_attractiveness	0,93	1		0,84	0,62
	benefits	0,74	0.746	0.076		
	salary	0,72	0.763	0.079		
Presence_on_the Local Market	the_biggest_IT_company	0,80	1		0,76	0,65
	the_biggest_company	0,77	1.093	0.162		
Citizenship	environment	0,73	1		0,81	0,59
	regional_development	0,76	1.189	0.147		
	community_development	0,80	1.14	0.136		

** significant at 0,05*

Source: AMOS 22. and Stats Tool Package 1

As it could be seen from Table 20, all the items reached the desired factor loadings of above 0,7. Additionally, the values of the construct reliability reached the desired values of above 0,7, as well (Nusir and Hua, 2010, p. 318). The convergent validity indicator

AVE with all the values of above 0,5 does not indicate any convergent validity issue (Nusir and Hua, 2010, p. 318).

Table 21 Discriminant validity matrix

	Emotional_Appeal	Communication	Presence_on_the_Local_Market	Workplace	Citizenship
Emotional_Appeal	0.863				
Communication	0.752	0.854			
Presence_on_the_Local_Market	0.549	0.391	0.784		
Workplace	0.729	0.512	0.644	0.804	
Citizenship	0.764	0.614	0.574	0.749	0.766

Source: AMOS 22. and Stats Tool Package 1

As the AVE for each construct is greater than the squared correlations between the construct and all other constructs in the model shown in Table 21, the test did not indicate any signs of discriminant validity issue.

4.2.1.1 Summary

The confirmatory factor analysis as a part of the structural equation modelling analysis was performed. The aim of the analysis was to evaluate the model fit of a theoretical model that was built on literature and the focus group interview. The initial model of six latent variables and 22 items was not accepted. Therefore, the model needed to be modified and the acceptable model fit was achieved. The final model consists of five latent variables and 15 items. The findings support hypotheses H6a, H6b, H6c, H6d, H1a, H1b, H1c, H2a, H2b, H4a, H4b, H4c, H5a, H5b and H5c. The remaining hypotheses H2c, H2d, H3a, H3b, H4d, H5d and H5e were rejected.

Table 22 CFA hypotheses summary

Accepted Hypotheses	Rejected Hypotheses
H6a, H6b, H6c, H6d, H1a, H1b, H1c, H2a, H2b, H4a, H4b, H4c, H5a, H5b, H5c	H2c, H2d, H3a, H3b, H4d, H5d, H5e

Source: self-made

The accepted hypotheses represent 15 final items that were concluded to be reliable and valid measures of their respective latent constructs. The rejected hypotheses represent seven items that had to be removed from the initial hypothetical model, as they were not reliable, nor valid measures of their respective latent constructs. The reason for removing each of these seven items will be mentioned.

The scale reliability of the initial model was achieved. In the first attempt to modify the model, the preference_to_work_there item was removed as it reported the factor loading below the desired level of 0,7. The normality test also revealed that this item might have some kurtosis issue. It could be argued that even though people overall find the company as an attractive employer, their major is not within the IT business and, therefore, they do not want to work there. In the next steps error terms of community_development and regionial_development, the_biggest_company and the_biggest_employer, salary and benefits, company_confidence and admire_and_trust, and the_biggest_company and th_biggest_IT_company were correlated. It could be argued that these items are to some degree similar and affect each other. After the first set of modifications, the model fit looked promising.

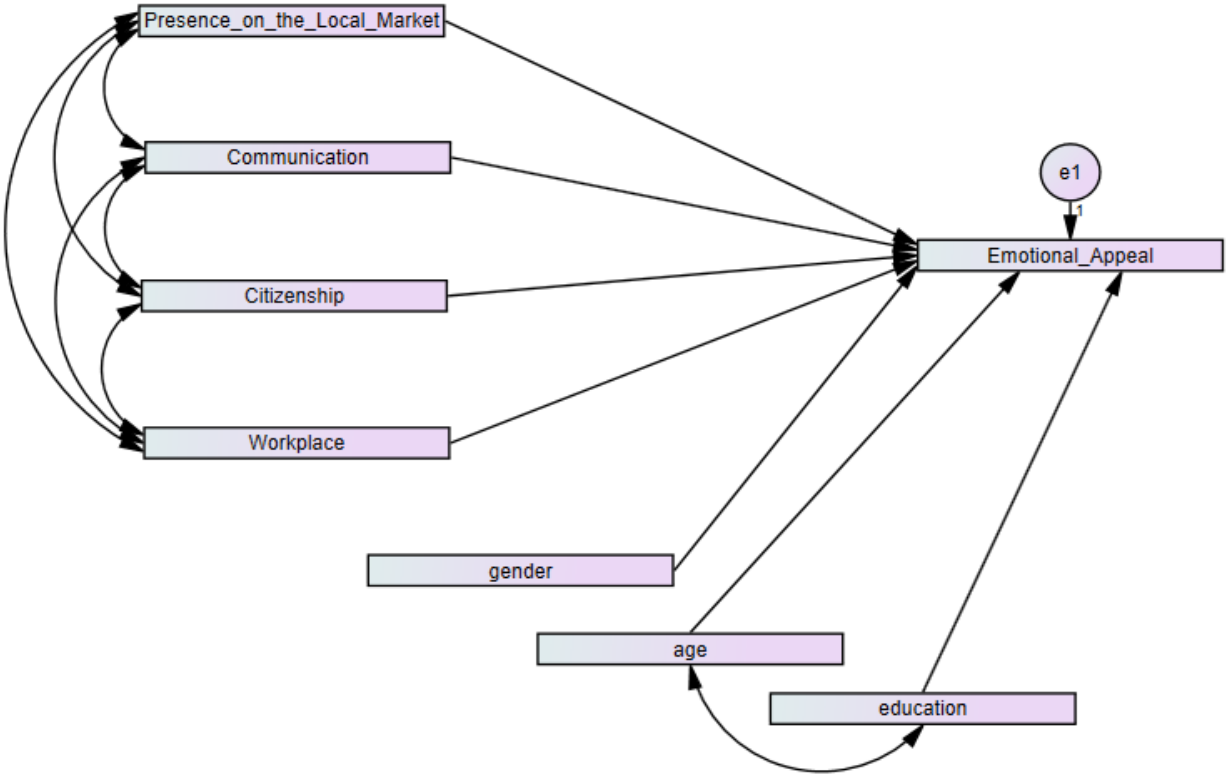
However, the validity and reliability tests revealed some unsatisfactory indices. Therefore, the further model modifications were needed. The factor loading of the_biggest_employer was below the desired level, thus the item was deleted. The reliability indices of the performance variable were too low. As the construct already reached the minimum number of items and no item could be removed, the whole construct was deleted from the model. In the next step, perspective_for_the_future, responsible_employer and ethics_and_responsibilities were deleted as they were loading into different factors at the same time. Fit indices for the new model were acceptable, with CMIN/DF 1,96, RMSEA 0,079, TLI 0,94, NFI 0,92, IFI 0,95 and CFI 0,96. All the above fit indices for the new CFA model indicated an acceptable fit. Additionally, reliability and validity tests did not indicate any issues. The model was tested for invariance; the results showed that the model was identically specified across groups of categorical variables.

4.2.2 The structural equation modelling (SEM) analysis - the structural model

In this part, the structural model is built from the measurement model. The following analysis aims to test hypothesized relationship between the constructs identified in the CFA analysis. The initial structural model had to be modified, as performance construct was not reliable. The new structural model is shown in Figure 14. The model is

controlled by the demographic variables - age, gender, education. Age and education are ordinal variables. Age is binominal, categorical variable where the value 0 indicate female and 1 indicate male. Residence and occupation cannot be included in the analysis, as they are categorical variables with more than two values.

Figure 13 Final structural model



Source: AMOS 22.

Although the model in Figure 14 might look a bit complex, the idea of the model is to test my hypotheses that presence_on_the_local_market, communication, citizenship, and workplace have a positive effect on emotional_appeal, so they can be considered as drivers of corporate reputation. Additionally, model included the controllers - the demographic variable - that are connected by an arrow with emotional_appeal. The idea of adding the controls is to test whether the hypothesized relationships between the constructs exist regardless of all the demographic variables. Age and education are already correlated, as the increase in one value could be arguable associated with an increase in the other value.

Table 23 SEM model fit indices

Fit Index		Practical Fit Indicies		Incremental Fit Indices									
CMIN/DF		RMSEA		TLI		RFI		NFI		IFI		CFI	
Desired	Actual	Desired	Actual	Desired	Actual	Desired	Actual	Desired	Actual	Desired	Actual	Desired	Actual
<0,3	1,02	<0,06	0,01	>0,95	0,99	>0,9	0,96	>0,9	0,98	>0,9	1	>0,9	1

Source: AMOS 22.

The model fit indices of the SEM model shown in Table 23 meet the desired values. The model fit is accepted.

Table 24 Regression weights

			Weight Estimate	S.E.	C.R.	P
Emotional_Appeal	<---	Presence_on_the_Local_Market	0.031	0.056	0.552	0.581
Emotional_Appeal	<---	Communication	0.470	0.050	9.383	***
Emotional_Appeal	<---	Citizenship	0.422	0.092	4.587	***
Emotional_Appeal	<---	Workplace	0.233	0.059	3.957	***
Emotional_Appeal	<---	age	-0.002	0.017	-0.125	0.900
Emotional_Appeal	<---	education	-0.014	0.042	-0.335	0.737
Emotional_Appeal	<---	gender	0.063	0.079	0.804	0.421

Source: AMOS 22.

Once the model was accepted, consideration might be given into the construct parameters. The positive values of weight estimate indicate positive relationship between the constructs. The negative values indicate negative relationship between the constructs. As it might be seen from Table 24, the p-values are positive at 0,001 only for relationship between communication, citizenship and workplace, and emotional_appeal. Therefore, the hypotheses H7a, H10a, and H11a can be accepted and it could be concluded that there is a positive relationship between these constructs. As the p-value is not significant for relationship between presence_on_the_market and emotional_appeal, the hypothesis H8a is rejected. The p-values are neither significant for weight estimates of the demographic variables. This means that the positive relationship between the constructs exists regardless of age, education, and gender.

Communication, citizenship, and workplace can be concluded as drivers of the emotional appeal, which is considered as a short measure of corporate reputation (Ponzi et al., 2011). For each standard point increase in respondents' evaluation of

communication, there is an increase in emotional_appeal of 0,47 points. For each standard point increase in respondents' evaluation of workplace, there is an increase in emotional_appeal of 0,233 points. For each standard point increase in respondents' evaluation of citizenship, there is an increase in emotional_appeal of 0,422 points.

Table 25 Multigroup moderation - known_employee_dummy

			known_employee_dummy0		known_employee_dummy1		
			Estimate	**P**	**Estimate**	**P**	**z-score**
Emotional_Appeal	<---	Presence_on_the_Local_Market	-0.150	0.236	0.074	0.273	1.561
Emotional_Appeal	<---	Communication	0.606	0.000	0.421	0.000	-1.73*
Emotional_Appeal	<---	Citizenship	0.409	0.010	0.454	0.000	0.233
Emotional_Appeal	<---	Workplace	0.216	0.100	0.230	0.000	0.094
Emotional_Appeal	<---	age	-0.004	0.881	-0.012	0.581	-0.207
Emotional_Appeal	<---	education	-0.027	0.733	0.015	0.764	0.449
Emotional_Appeal	<---	gender	0.093	0.527	0.066	0.467	-0.158
*Notes: *** p-value < 0.01; ** p-value < 0.05; * p-value < 0.10*							

Source: AMOS 22. and Stats Tool Package 1

For those who do not know any employee at T-Systems, there is a strong, positive effect of communication on emotional_appeal as shown in Table 25. For those who do know an employee of T-Systems, the effect between communication and emotional_appeal is still positive, but by app. 30 % weaker than for those who do not know an employee. This implies that the impact of communication on emotiona_appeal is significantly different between these two groups. It could be argued that people who know an employee are less affected by the communication while evaluating the company's reputation. It is interesting to mention that the multigroup moderation of known_employee_dummy was not confirmed for the workplace variable. However, the p-value of 0,09 for this moderation is close to be significant. This moderation would be more expected as we speak about employees and their workplace.

Table 26 Multigroup moderation - industry_dummy

			industry_dummy0		industry_dummy1		
			Estimate	**P**	**Estimate**	**P**	**z-score**
Emotional_Appeal	<---	Presence_on_the_Local_Market	-0.032	0.671	0.045	0.567	0.707
Emotional_Appeal	<---	Communication	0.626	0.000	0.394	0.000	-2.316**
Emotional_Appeal	<---	Citizenship	0.294	0.004	0.503	0.001	1.120
Emotional_Appeal	<---	Workplace	0.252	0.000	0.213	0.025	-0.329
Emotional_Appeal	<---	age	-0.022	0.233	0.012	0.669	1.023
Emotional_Appeal	<---	education	0.047	0.394	-0.045	0.456	-1.125
Emotional_Appeal	<---	gender	0.108	0.268	0.064	0.576	-0.291
Notes: *** p-value < 0.01; ** p-value < 0.05; * p-value < 0.10							

Source: AMOS 22. and Stats Tool Package 1

As it might be seen in Table 26, for those who did not know the industry where T-Systems operates in, the effect of communication on emotional_appeal is strong and positive. For those who knew the industry, the effect of communication on emotional_appeal is still positive, but by app. 46 % weaker than for those who did not know the industry. This implies that the impact of communication on the emotiona_appeal is significantly different between these two groups.

Table 27 Multigroup moderation - product_dummy

			product_dummy0		product_dummy1		
			Estimate	**P**	**Estimate**	**P**	**z-score**
Emotional_Appeal	<---	Presence_on_the_Local_Market	0.061	0.506	0.080	0.244	0.170
Emotional_Appeal	<---	Communication	0.398	0.000	0.524	0.000	1.233
Emotional_Appeal	<---	Citizenship	0.457	0.000	0.391	0.003	-0.365
Emotional_Appeal	<---	Workplace	0.223	0.009	0.209	0.008	-0.116
Emotional_Appeal	<---	age	-0.001	0.966	-0.009	0.681	-0.245
Emotional_Appeal	<---	education	-0.006	0.917	-0.075	0.171	-0.831
Emotional_Appeal	<---	gender	0.098	0.379	-0.016	0.878	-0.750
Notes: *** p-value < 0.01; ** p-value < 0.05; * p-value < 0.10							

Source: AMOS 22. and Stats Tool Package 1

Table 27 reveals that there is no difference in effects of corporate reputation drivers on the short measure of corporate reputation. Although, there might be seen similarity in product_dummy and industry_dummy variables, the multi group variation was confirmed only for industry_dummy. The reason for it could be that more respondents knew the industry where the company operates in than the products it sells.

4.2.2.1 Summary

The goodness-of-fit indices with CMIN/DF 1,02, RMSEA 0,01, TLI 0,99, RFI 0,96, NFI 0,89, IFI 1, and CFI 1 for the hypothesized structural model suggest a good model fit to the data.

Table 28 SEM hypotheses summary

Accepted Hypotheses	Rejected Hypotheses
H7a, H10a, H11a, H7e, H7f	H8a, H9a, H10e, H10f, H11e, H11f, H7b, H7c, H7d, H10b, H10c, H10d, H11b, H11c, H11d

Source: self-made

The results of the hypothesized structural model indicate support of H7a with the path coefficient of 0,47 between communication and emotional_appeal, support of H10a with the path coefficient of 0,23 between workplace and emotional_appeal and support of H11a with the path coefficient of 0,42 between citizenship and emotional_appeal. H8a was rejected, as the path coefficient between presence_on_the_local_market and emotional_appeal was not significant. H9a was rejected as performance was not reliable.

Additional multigroup moderation tests confirmed H7e and H7f as the difference of relationship strength between communication and emotional_appeal was significant between the subgroups. The results of remaining multigroup moderation tests were not significant, thus H10e, H10f, H11e and H11f were rejected.

The results confirmed that positive relationships between the constructs exist regardless of age, gender, and education of respondents. Therefore, H7b, H7c, H7d, H10b, H10c, H10d, H11b, H11c and H11d were rejected.

5 Discussion

The discussion chapter will start with a short presentation of findings. Afterwards, implications of the research, limitations and future research will be discussed.

5.1 Presentation of findings

Corporate reputation was defined as overall awareness (estimation) and judgement of the organization held by the local community based on the corporation's past and current actions, and expected future behaviour. Literature on corporate reputation and its measurement was reviewed and compared. Four models measuring corporate reputation were identified as the most suitable for measuring corporate reputation from the perspective of the local community. This choice is mainly attributed to the models' quantitative nature and wide application in practice. The four models were discussed and combined. The key attributes of corporate reputation from the literature were evaluated by the focus group. The hypothesized model for measuring the corporate reputation of T-Systems Slovakia in the local community included a first-order latent variable - emotional_appeal - considered as a short measure of corporate reputation by Ponzi et al. (2011) and second-order latent variables - communication, presence_on_the_local_market, workplace, citizenship, and performance - considered as drivers of corporate reputation.

The hypothesized model was tested using the CFA and SEM analyses. The CFA tested hypotheses that positive relationship between 22 observed variables and their six underlying latent constructs exists. As a result of the CFA, seven variables and one latent construct were dropped from the model due to low factor loadings, reliability and validity issues. The model fit indices of the modified hypothetical model indicated an acceptable model fit. Therefore, the measurement model of the CFA transformed to the structural model of the SEM. The indices of the SEM model indicated a good model fit. The positive relationship between communication and emotional_appeal, workplace and emotional_appeal, and citizenship and emotional_appeal was confirmed.

The emotional_appeal could be assessed as the reliable and valid measure of corporate reputation from the perspective of the local community. Additionally,

communication, workplace, and citizenship could be considered as reliable and valid drivers of corporate reputation.

Table 29 Corporate reputation indices

Construct	Variable	Mean	Std. Deviation	Mean	Std. Deviation
	company_confidence	3.16	1.31		
	admire_and_trust	3.12	1.44		
	company_reputation	2.74	1.44		
Emotional_Appeal	company_feeling	2.78	1.41	2.95	1.27
	community_development	2.86	1.41		
	regional_development	2.83	1.53		
Citizenship	environment	3.10	1.34	2.93	1.25
	salary	3.42	1.47		
	benefits	3.31	1.41		
Workplace	workplace_attractiveness	2.78	1.49	3.17	1.32
	communication_with_the_public	3.16	1.50		
	communication_with_the_company	3.31	1.47		
Communication	communication_channels	3.22	1.41	3.23	1.32

Source: SPSS 22.

As it might be seen from Table 29, emotional_appeal, which is considered as a short measure of corporate reputation, reached the grand mean of 2,95 on a 7-point likert scale from 1 to 7. As the value of 2,95 is closer to 1 than to 7, it could be concluded that T-Systems has rather a positive reputation in the local community. This number can serve as the basis while comparing the results of the study over a period. Lower values will indicate that reputation has changed positively, while higher values will indicate that reputation has changed negatively. While comparing these results to events that happened in this period, it could be seen whether the event had a positive or negative impact on the company's reputation.

The drivers of corporate reputation - citizenship, communication, and workplace - are evaluated positively as all of them reported values closer to 1 than to 7. Communication has the biggest weight on corporate reputation followed by citizenship and workplace. Additionally, the environment activities were evaluated less positively than the other activities within the citizenship construct. Moreover, the evaluation of salary is less positive than the evaluation of benefits and workplace_attractiveness and similarly

communication_with_the_company is less positive than communication_channels and communication_with_the_public.

5.2 Implication of the research

The research addresses a gap in the literature and proposes a model that can be used to measure quantitatively corporate reputation of the company from the perspective of the local community.

The short measure of corporate reputation as suggested by Ponzi et al. (2011) is confirmed to be a reliable and valid measure in the case of T-Systems. This implies that the short measure of corporate reputation can be also used to assess the company's reputation in the local community. The research confirms that workplace and communication are drivers of corporate reputation as suggested by Fombrun et al. (2000), Reputational Institute (2014) and Stacks et al. (2013). Additionally, communication as a driver of corporate reputation as suggested by Stacks et al. (2013) is confirmed in the case of T-Systems. This implies that corporate reputation in the local community might be also driven by communication, workplace, and citizenship.

Furthermore, as communication was confirmed to be a valid and reliable driver of corporate reputation in the case of T-Systems, it might potentially apply in other cases, as well. The prestige measure of corporate reputation developed by Reputation Institute and Fombrun et al. does not consider communication as a driver of corporate reputation, yet. This research could indicate that Reputation Institute and Fombrun et al. might consider communication as a new driver of corporate reputation.

Performance variable suggested by Fombrun et al. (2000), Reputational Institute (2014) and Stacks et al. (2013) as a driver of the corporate reputation of T-Systems in the local community could not be tested. The reason for it was a construct reliability issue. In the future research, a more reliable measure of performance could be proposed and positive relationship between performance and corporate reputation in the context of the local community can be retested.

Presence of a potentially new corporate reputation driver – presence_on_the_local_market - that is not covered in literature was not confirmed.

Although the new construct was reliable and valid, its positive relationship with emotional appeal was not proved. Therefore, it can be concluded that presence_on_the_local_market might not be considered as a driver of corporate reputation in the local community.

The drivers of corporate reputation used in this research come from very prominent studies such as Reputation Institute's RQ. This model is based on a set of indices that form an index. Accepting that it is a reflective structure, the epistemic nature of this measure is widely criticized in the literature. Even though I used the drivers of reputation from reflective structures, I applied the formative principle in my study. Achieving an acceptable model fit of the formative model (with reliable and valid constructs) implies that the drivers of reputation previously used in reflective settings, might work well in formative settings, too. This model could even portray a formative alternative to the reflective measure of the Reputational Institute.

For T-Systems, the fact that the final model can be used to assess corporate reputation in the local community might be more valuable that the results of mean values of responses. As the emotional appeal was a reliable and valid measure of corporate reputation, the company might use the company_feeling, admire_and_trust, company_confidence, and company_reputation variables to measure reputation in the future as well. Subsequently, the variables like communication_with_the_public, communication_with_the_company, and communication_channels can be used again to assess overall communication as a driver of corporate reputation. Community_development, regional_development, and environment variables can be again used to assess citizenship of the company. Salary, benefits, and workplace_attractiveness can be used to assess the workplace of T-Systems.

Communication with the highest path coefficient between the construct and the emotional appeal implies that communication has the highest weight on company's reputation in the local community. The implication that derives from this fact is that the corporate reputation of T-Systems might be the fastest improved though improving the communication. However, it was found out that the weight of communication on corporate reputation is significantly different between respondents who know an

employee of T-Systems or industry than for those who do not know it. The results imply that for groups of people who know an employee of T-Systems or the industry where the company operates in, the fastest way of changing corporate reputation is through communication. For the remaining groups, the fastest way of changing corporate reputation is through improving company's workplace. Such findings might suggest some degree of dissatisfaction among employees. Although, it was not tested whether the group of respondents who know a T-Systems employee is identical with the group of respondents who know the company's industry, it might be interesting to test this hypothesis, too.

The presence_on_the_local_market variable suggested by the communication specialists of T-Systems during the focus group did not have a positive effect on reputation, although it is a reliable and valid measure. In fact, it has no effect on reputation at all (neither positive nor negative). This implies that the company cannot consider this variable as a driver of its corporate reputation in the local community. Perhaps, this variable can be used in other surveys where the company might aim to investigate corporate reputation from the perspective of other stakeholders.

The study also explains what the brand recognition of T-Systems is. The brand recognition is equal to a proportion of respondents who heard about T-Systems to respondents who did not hear. Therefore, the brand recognition of 89,1% from this study sets a base line for any other similar studies.

The grand mean of emotional_appeal of 2,95 indicates that the company tends to have rather positive reputation in the local community. Similarly, mean values closer to 1 for communication, workplace, and citizenship indicate positive results. However, this study is the very first of its kind and the results cannot be compared with any other results. Therefore, these results can serve as a basis to compare the results of the similar study in the future. A decrease of mean values indicates an improvement in reputation, while an increase in mean values indicates that reputation was worsened. This model might also offer a tool for measuring the impact of activities in the region. While the company missed an effective tool for measuring the impact of its external activities, the model being applied on a regular basis can provide a key performance indicator for such

activities. This is applicable, especially, when most of these activities aim to improve the company's reputation in the region.

5.3 Limitations

As in any empirical research, the results of this study cannot be interpreted without taking into account its limitations.

Firstly, the proposed hypothetical model was restricted to reputation of one company - T-Systems - and to one community setting - Kosice Region. To develop the generalized model for measuring corporate reputation in the local community, the model needs to be validated in different industry settings.

Secondly, as the measure was developed from the theories considering different stakeholders' views, the company might use it to investigate the reputation of other stakeholders as well. In that case, handling of low-weighted items should be set in focus. As some authors claim that different stakeholders put different weight on a reputation dimension, low weight of presence_on_the_local_market on emotional_appeal might not be the case under different circumstances. Thus, different weights of indicators might come out from different stakeholder views.

The next limitation of the project derives from the disproportional age distribution of respondents to the age distribution of the population.

Table 30 Age and gender distribution

	Real Population Proportion	Sample Proportion	Change
Age			
15-19	7.6 %	13.5 %	5.9 %
20-24	8.9 %	33.3 %	24.4 %
25-29	9.7 %	17.9 %	8.2 %
30-34	9.8 %	8.3 %	-1.5 %
35-39	9.8 %	8.3 %	-1.5 %
40-44	8.1 %	6.4 %	-1.7 %
45-49	8.1 %	3.8 %	-4.2 %
50-54	8.1 %	1.3 %	-6.8 %
55-59	8.2 %	2.6 %	-5.7 %
60-64	7.1 %	2.6 %	-4.5 %
65-69	4.8 %	1.3 %	-3.5 %
70 and more	9.7 %	0.6 %	-9.1 %
Gender			
Males	48.3 %	58,3 %	10 %
Females	51.7 %	41,7 %	-10 %

Source: Slovak.statistics.sk

Although, the research failed to keep the right age and gender proportions, I would argue that the results are still valid. Firstly, the multigroup moderation tests showed that the results apply regardless of gender or age. Secondly, T-Systems with its average age of employees of 30 years, is interested to employ especially young people. Therefore, the company's positive reputation is more important in young, active part of the community. Despite this disproportion, the model still presents a valid and reliable measure of corporate reputation in the local community.

The second limitation of the research might be its the low sample size. Discussion about the minimum required sample size for the SEM analysis is widely present in literature. Although, my sample size of 154 meets the minimum size requirement of some scholars, I acknowledge that this could potentially affect the model fit indicators. However, Widaman and Thompson (2010, p. 18) argue that RMSEA is relatively independent of the sample size and thus perform well as indices of practical fit. Given the fact that my RMSEA values reached acceptable levels, the limitation that the low sample size could affect the model fit indices and, thus, lead to wrong decisions is diminished.

Nusir and Hua (2010, p. 320) suggest that the SEM is most appropriate when the researcher has multiple constructs, each represented by several measured variables. The lack of multiple variables measuring performance could result in low construct reliability. Having more variables measuring the construct at the beginning, reliability issues might not be confirmed.

5.4 Future research

The future research could address the limitations of this research.

As it was previously mentioned, it is recommended to propose more than two variables measuring performance. By having more performance variables, better reliability can be achieved. Additionally, the proposed hypothetical positive relationship between performance and emotional_appeal can be retested with more reliable and valid performance measures.

Furthermore, it is recommended to test the model in different industry and stakeholder settings. By testing it in different industry settings, the model might be generalized for measuring corporate reputation in any local community. By testing a model in different stakeholder settings, a new driver of corporate reputation – presence_on_the_local_market – might be confirmed.

The future research might be built on findings from this project. Thus, the items with low factor loading or items cross loading to different variables might be dropped from the questionnaire. The items from the accepted hypothesized model should be included in the future study. However, the future research should not be restricted to those items only. New items might be added to the model and tested.

It is recommended to keep the accepted latent variables in the next research of the corporate reputation of T-Systems in the community. By that way, comparison of results will be possible and additional conclusions might be drawn. This however, does not mean that new latent variables cannot be added to the model.

A construct that acts as exogenous variable can become an endogenous variable. This implies that additional paths can be proposed and tested. In this research, a positive

and direct effect of presence_on_the_local_market on emotional_appeal was not confirmed. The future research might want to investigate whether there is any indirect effect of presence_on_the_local_market on emotional_appeal through remaining variables. Similarly, the remaining variables might mediate the effects between the other variables. This can be tested by proposing different paths between the constructs.

To follow up with this research, the company might want to investigate closer each construct. It was found out that one of the ways to improve corporate reputation is through improving its communication, workplace, or citizenship. This research does not provide any information on how to improve these constructs. Therefore, the company might want to investigate these aspects.

The additional research might investigate which newspapers the local community read, which radio station it listens to, which TV channels it watches and so on. Focus group or additional in-depth interviews with the representative sample of the community might be conducted to find out which aspects of communication with the public or with the company the local community likes or does not like. Qualitative methods can follow this quantitative research in order to find out how communication can be improved. Similarly, using the same methods, the company might want to investigate which environmental, community or regional development activities are most appreciated by the community.

The research might follow internally by surveying the internal stakeholders – employees – of the company. The additional internal research might reveal why employees' connections in the local community tend to trust less to communication than the remaining part of the population.

As some scholars argue that corporate reputation should be studied from the perspective of multiple stakeholders, the follow up research might want to measure the corporate reputation of T-Systems from the perspective of other important stakeholder groups including analysts, non-government groups, regulators, and reporters. Having views from multiple stakeholders, the picture about the overal corporate reputation of T-Systems might be created.

6 Conclusion

Although the construct of corporate reputation has been well discussed in the literature, little attention has been put into its measuring from the perspective of the local community. This paper addresses a need identified by T-Systems and empirically tests the hypothesized model measuring the corporate reputation of T-Systems from the perspective of the local community.

Corporate reputation was defined as overall awareness (estimation) and judgement of the organization held by the local community based on the corporation's past and current actions, and expected future behaviour. Based on four commonly used, quantitative measures of corporate reputation, the theoretical model measuring the corporate reputation of T-Systems Slovakia from the perspective of the local community was developed.

The proposed model was empirically tested on the sample of 156 respondents by means of a self-administered questionnaire. Using the confirmatory factor analysis, 15 variables loading to five latent variables were concluded to be reliable and valid measures of corporate reputation and its drivers in the local community. Based on the confirmatory factor analysis, the structural model was built. The results of the structural equation analysis indicated significant and positive effect of communication, workplace, and citizenship on emotional appeal. As suggested by Ponzi et al. (2011) emotional appeal was concluded to be a reliable and valid measure of corporate reputation in the local community. Additionally, communication, workplace, and citizenship were concluded to be reliable and valid drivers of corporate reputation in the local community.

In sum, I suggest that the final model consisting of emotional appeal and its drivers – communication, citizenship, and workplace – can be used to: (1) measure the corporate reputation of T-Systems from the perspective of the local community; (2) measure the drivers of the corporate reputation of T-Systems from the perspective of the local community; (3) used repeatedly to compare the results of the study over a period of time.

Moreover, the final model was used to assess the corporate reputation of T-Systems Slovakia. The grand mean of emotional appeal reached the value of 2,95 on the 7 point-likert scale. This result indicates that T-Systems tends to have rather a positive reputation in the local community. Similarly, the drivers of corporate reputation were evaluated positively as the values for respective grand means were closer to 1 than 7. However, the limitation of these findings lies in the relatively small sample size compared to the size of population. Therefore, the company might want to use the final model to obtain more responses and thus to obtain more accurate results.

This research addresses a gap identified in literature and proposes a model that can be applied to measure corporate reputation from the perspective of the local community. The view of the local community while measuring corporate reputation was rather neglected in the literature. The proposed theoretical model is empirically tested and confirmed to be a reliable and valid measure of corporate reputation in the local community. Yet, these findings were tested only in one industry setting. To generalize the findings for wide application of the model in the local community, the findings must be confirmed in other industry settings, as well.

Most importantly, the research addresses a need identified by T-Systems and provides the company with a reliable and valid tool for measuring its corporate reputation in the local community. This model can be again applied in this context and improved based on the findings from this research. Additionally, it might present a new key performance indicator used to measure an impact of the company's activities and events in the region. The grand mean values of the model indicators can serve as a basis while comparing results of future studies. As this is the first study of such kind, results from next studies can be benchmarked with the results from this initial study. As constructs follow reflective structures and the results are reported as grand means, new measures can be added to a construct and the results of the grand means can be still compared with the initial results. This applies only when the same 7 point-likert scale is kept.

However, this model was only validated in one stakeholder setting – the perspective of the local community. If the company wants to use this model in different stakeholder settings, the model must be validated for these stakeholder settings, as well.

Additionally, the results of this research might indicate a direction that company should follow if it wants to improve its corporate reputation. The results imply that for groups of people who know an employee of T-Systems Slovakia or the industry where the company operates in, the fastest way of changing corporate reputation is through communication. For the remaining groups, the fastest way of changing corporate reputation is through improving perception of company's workplace. Such findings might suggest some degree of dissatisfaction among employees as messages they send out might cause that their connections in the local community trust less to messages that the company sends out.

7 References

Aaker, David A. 1992. The Value of Brand Equity, *Journal of Business Strategy*, 13 (4), 27-32.

Arbnor, I. and Bjerke, B. (2009). *Methodology for Creating Business Knowledge*. 1st ed. London: Sage Publications.

Ashforth, B. E. and Gibbs, B. W. 1990. The double-edge of organizational legitimation. *Organization science*, 1 (2), pp. 177--194.

Babin, B. J., Carr, J. C., Griffin, M. and Zikmund, W. G. 2012. *Business research methods*. 8th ed. South-Western Cengage Learning.

Barnett, M. L., Jermier, J. M. and Lafferty, B. A. 2006. Corporate reputation: The definitional landscape. *Corporate Reputation Review*, 9 (1), pp. 26--38.

Barney, J. 1991. Firm resources and sustained competitive advantage. *Journal of management*, 17 (1), pp. 99--120.

Berens, G. and Riel, C. 2004. Corporate associations in the academic literature: Three main streams of thought in the reputation measurement literature. Corporate Reputation Review, 7 (2), pp. 161--178.

Boyd, B., Bergh, D. and Ketchen, D. (2010). Reconsidering the reputation—performance relationship: A resource-based view. *Journal of Management*, 36(3), pp.588--609.

Bromley, D. B. 2002. Relationships between personal and corporate reputation. *European journal of marketing*, 35 (3/4), pp. 316--334.

Byrne, B. (2004). Testing for multigroup invariance using AMOS graphics: A road less traveled. *Structural Equation Modeling*, 11(2), pp.272--300.

Caruana, A. and Chircop, S. 2000. Measuring corporate reputation: a case example. *Corporate Reputation Review*, 3 (1), pp. 43--57.

Caves, R. E. and Porter, M. E. 1977. From Entry Barriers to Mobility Barriers:

Conjectural Decisions and Contrived Deterrence to New Competition*. *The Quarterly Journal of Economics*, pp. 241--261.

Chun, R. 2005. Corporate reputation: Meaning and measurement. *International Journal of Management Reviews*, 7 (2), pp. 91--109.

Clardy, A. 2012. Organizational Reputation: Issues in Conceptualization and Measurement. *Corporate Reputation Review*, 15 (4), pp. 285--303.

Clive, C. 1997. Part I: Corporate Reputation as a Strategic Asset: Corporate Reputation and the Bottom Line. *Corporate Reputation Review*, 1 (1), pp. 19--23.

Curran, P. (1994). The robustness of confirmatory factor analysis to model misspecification and violations of normality.

Davies, G., Chun, R., Da Silva, R. V. and Roper, S. 2001. The personification metaphor as a measurement approach for corporate reputation. *Corporate Reputation Review*, 4 (2), pp. 113--127.

Diamantopoulos, A. and Winklhofer, H. (2001). Index construction with formative indicators: an alternative to scale development. *Journal of Marketing research*, 38(2), pp.269--277.

Dierickx, I. and Cool, K. 1989. Asset stock accumulation and sustainability of competitive advantage. *Management science*, 35 (12), pp. 1504--1511.

Dimaggio, P. J. and Powell, W. W. 1983. The iron cage revisited: Institutional isomorphism and collective rationality in organizational fields. *American sociological review*, pp. 147--160.

Dowling, G. R. 2004. Journalists' evaluation of corporate reputations. Corporate Reputation Review, 7 (2), pp. 196--205.

ed. Upper Saddle River, New Jersey: Prentice Hall.

Emler, N. (1990). A social psychology of reputation. *European review of social psychology*, 1(1), pp.171--193.

Finstad, K.. (2010). Response Interpolation and Scale Sensitivity: Evidence Against 5 -

Point Scales. *Journal of usability studies*. 5 (3), p.104 -110.

Fombrun, C. and Riel, C. B. M. 1997. The reputational landscape. Corporate reputation review, pp. 1--16.

Fombrun, C. J. 1998. Indices of corporate reputation: an analysis of media rankings and social monitors' ratings. *Corporate reputation review*, 1 (4), pp. 327--340.

Fombrun, C. J., Gardberg, N. A. and Sever, J. M. 2000. The reputation quotient: A multi-stakeholder measure of corporate reputation. *Journal of Brand Management*, 7 (4), pp. 241--255.

Fombrun, C.J. and Riel, C.B.M. 2004. Fame & Fortune. *Upper Saddle River*, NJ : Pearson Education, Inc .

Gagne, P. and Hancock, G. (2006). Measurement model quality, sample size, and solution propriety in confirmatory factor models. *Multivariate Behavioral Research*, 41(1), pp.65--83.

Gaines-Ross, L. 1998. Part III: Measuring and Valuing Reputations: Leveraging Corporate Equity. Corporate Reputation Review, 1 (1), pp. 51--56.

Gottschalk, P. 2011. *Corporate social responsibility, governance and corporate reputation*. New Jersey: World Scientific.

Hair, J., Anderson, R., Tatham, R., & Black, W. (1998). *Multivariate data analysis.* 5th

Hannington, T. 2004. *How to measure and manage your corporate reputation*. Aldershot, England: Gower.

Helm, S. 2005. Designing a formative measure for corporate reputation. Corporate reputation review, 8 (2), pp. 95--109.

Houston, M. B. 2003. Alliance partner reputation as a signal to the market: evidence from bank loan alliances. *Corporate Reputation Review*, 5 (4), pp. 330--342.

Hu, L. and Bentler, P. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling: A Multidisciplinary Journal*, 6(1), pp.1--55.

Jackson, K. T. 2004. *Building reputational capital*. Oxford: Oxford University Press.

Kline R. B. (1998). *Principles and practice of structural equation modeling*. New York, NY: Guilford Press.

Kline, R. B. (2005). *Principles and practice of structural equation modeling*. 2nd ed. New York: Guilford Press.

Kuada, J. 2012. *Research Methodology: A Project Guide for University Students*. Frederiksberg C: Samfundslitteratur

Marcoulides, G. (1998). *Modern methods for business research*. 1st ed. Mahwah, N.J.: Lawrence Erlbaum.

Markwick, N. and Fill, C. 1997. Towards a framework for managing corporate identity. *European Journal of marketing*, 31 (5/6), pp. 396--409.

Marsh, H., Hau, K. and Wen, Z. (2004). In search of golden rules: Comment on hypothesis-testing approaches to setting cutoff values for fit indexes and dangers in overgeneralizing Hu and Bentler's (1999) findings. *Structural equation modeling*, 11(3), pp.320--341.

Marziliano, N. 1997. Part VII: Managing Reputation: Pursuing Everyday Excellence: Organizational images: Between being and appearing. *Corporate Reputation Review*, 1 (2), pp. 157--164.

Milfont, T. and Fischer, R. (2010). Testing measurement invariance across groups: Applications in cross-cultural research. *International Journal of psychological research*, 3(1), pp.111--130.

Murray, K. and White, J. 2005. CEOs' views on reputation management. *Journal of Communication Management*, 9 (4), pp. 348--358.

Murray, R. Thomas. 2003. *Blending qualitative & quantitative research methods in theses and dissertations*. 1st ed. Thousand Oaks, Calif.: Corwin Press.

Nusair, K. and Hua, N. (2010). Comparative assessment of structural equation modeling and multiple regression research methodologies: E-commerce context. *Tourism*

Management, 31(3), pp.314--324.

Nusair, K. and Hua, N. 2010. Comparative assessment of structural equation modeling and multiple regression research methodologies: E-commerce context. *Tourism Management*, 31(3), pp.314--324.

Ponzi, L. J., Fombrun, C. J. and Gardberg, N. A. 2011. RepTrak™ pulse: Conceptualizing and validating a short-form measure of corporate reputation. Corporate Reputation Review, 14 (1), pp. 15--35.

Porac, J. F. and Thomas, H. 1990. Taxonomic mental models in competitor definition. *Academy of Management Review*, 15 (2), pp. 224--240.

Post, J. E. and Griffin, J. J. 1997. Part vii: Managing reputation: Pursuing everyday excellence: Corporate reputation and external affairs management. *Corporate Reputation Review*, 1 (2), pp. 165--171.

Reputationinstitute.com. 2014. Reputation Institute. [online] Available at: http://www.reputationinstitute.com/ [Accessed: 6 Apr 2014].

Rindova, V. P. and Fombrun, C. J. 1999. Constructing competitive advantage: the role of firm--constituent interactions. *Strategic management journal*, 20 (8), pp. 691--710.

Satir, \. 2006. The nature of corporate reputation and the measurement of reputation components: An emprical study within a hospital. Corporate Communications: An International Journal, 11 (1), pp. 56--63.

Schwaiger, M. (2004). COMPONENTS AND PARAMETERS OF CORPORATE REPUTATION--AN EMPIRICAL STUDY. *Schmalenbach Business Review (SBR)*, 56(1).

Shapiro, C. 1983. Premiums for high quality products as returns to reputations. *The quarterly journal of economics*, 98 (4), pp. 659--679.

Shrum, W. and Wuthnow, R. 1988. Reputational status of organizations in technical systems. *American Journal of Sociology*, pp. 882--912.

Slovak.statistics.sk, 2014. *Štatistický úrad SR - Úvodná stránka*. [online] Available at: http://slovak.statistics.sk/wps/portal/ext/home/!ut/p/b1/04_Sj9CPykssy0xPLMnMz0vMAfGjzOIDzT0tnJwMHQ0s_IJcDTxDHAPcg7xMDA1MTIEKIoEKDHAARwNC-sP1o8BKnN0dPUzMfQwMLHzcTQ08HT1CgywDjY0NHI2hCvBY4eeRn5uqX5AbYZBl4qgIAL9TbiU!/dl4/d5/L2dBISEvZ0FBIS9nQSEh/ [Accessed 26 Apr. 2014].

Stacks, D. W., Dodd, M. D. and Men, L. R. 2013. Corporate reputation measurement and evaluation. The Handbook of Communication and Corporate Reputation, pp. 559--573.

Statistics.laerd.com, (2014). *Independent T-Test in SPSS - Procedure, output and interpretation of the output using a relevant example.*. [online] Available at: https://statistics.laerd.com/spss-tutorials/independent-t-test-using-spss-statistics.php [Accessed 10 May. 2014].

Suhr, D. (unknown). Exploratory or Confirmatory Factor Analysis?. *Statistics and Data Analysis*, pp.1 - 17.

Tadelis, S. 1999. What's in a Name? Reputation as a Tradeable Asset. *American Economic Review*, pp. 548--563.

Tavakol, M. and Dennick, R. (2011). Making sense of Cronbach's alpha. *International journal of medical education*, 2, pp.53--55.

Riel, C. B., Stroeker, N. E. and Maathuis, O. J. M. 1998. Measuring corporate images. Corporate Reputation Review, 1 (4), pp. 313--326.

VUCKE, 2014. *General Information*. [online] Available at: http://web.vucke.sk/en/ [Accessed 25 Apr. 2014]

Walker, K. 2010. A systematic review of the corporate reputation literature: Definition, measurement, and theory. *Corporate Reputation Review*, 12 (4), pp. 357--387.

Wartick, S. L. 2002. Measuring Corporate Reputation Definition and Data. Business \& Society, 41 (4), pp. 371--392.

Whetten, D. A. and Mackey, A. 2002. A social actor conception of organizational identity

and its implications for the study of organizational reputation. *Business & Society*, 41 (4), pp. 393--414.

Widaman, K. and Thompson, J. (2003). On specifying the null model for incremental fit indices in structural equation modeling. *Psychological methods*, 8(1), p.16.

Appendix 1

Translated questionnaire.

TO BE REPLACED BY THE QUESTIONNAIRE

TO BE REPLACED BY THE QUESTIONNAIRE

Appendix 2

The coding scheme.

Table 31 Coding scheme

Code in SPSS/AMOS	Label	Value
familiarity_dummy	Have you heard about T-Systems Slovakia (further T-Systems)?	0 No 1 Yes
employed_dummy	Are you employed at T-Systems?	
known_employee_dummy	Do you know any employee of T-Systems?	
industry_dummy	What business would you say T-Systems is in?	0 Incorrect 1 Correct
product_dummy	What products or services do you think T-Systems offers?	
presence_on_the_market	Presence on the local market	
the_biggest_company	T-Systems is one of the biggest companies in Eastern Slovakia.	1 Entirely agree 2 Mostly agree 3 Somewhat agree 4 Neither agree nor disagree 5 Somewhat disagree 6 Mostly disagree 7 Entirely disagree
the_biggest_IT_company	T-Systems is one of the biggest IT companies in Eastern Slovakia.	
the_biggest_employer	T-Systems is one of the biggest employers in Eastern Slovakia.	
perspective_for_the_future	T-Systems has perspective for the future in Eastern Slovakia.	
Citizenship	Citizenship	
community_development	T-Systems supports development of the local community.	1 Entirely agree 2 Mostly agree 3 Somewhat agree 4 Neither agree nor disagree 5 Somewhat disagree 6 Mostly disagree 7 Entirely disagree
regional_development	T-Systems supports development of Kosice Region	
environment	T-Systems is an environmentally friendly organization.	
responsible_employer	T-Systems cares about its employees.	
ethics_and_responsibilities	T-Systems is an ethical and responsible organization.	
workplace	Workplace	
salary	T-Systems offers its employees high salary.	1 Entirely agree 2 Mostly agree

benefits	T-Systems offers its employees high benefits	3 Somewhat agree 4 Neither agree nor disagree 5 Somewhat disagree 6 Mostly disagree 7 Entirely disagree
workplace_attractiveness	T-Systems is an attractive employer.	
preference_to_work_there	I would like to work at T-Systems.	
performance	Performance	
finances_management	T-Systems manages well its finances.	1 Entirely agree 2 Mostly agree 3 Somewhat agree 4 Neither agree nor disagree 5 Somewhat disagree 6 Mostly disagree 7 Entirely disagree
profitability	T-Systems is a profitable organization.	
communication	Communication	
communication_with_the_public	I evaluate positively communication of T-Systems with the public.	1 Entirely agree 2 Mostly agree 3 Somewhat agree 4 Neither agree nor disagree 5 Somewhat disagree 6 Mostly disagree 7 Entirely disagree
communication_with_the_company	I evaluate positively communication with T-Systems.	
communication_channels	I evaluate positively communication channels that T-Systems uses to communicate with the public.	
emotional_appeal	Overall Evaluation	
company_feeling	T-Systems is a company I have a good feeling about.	1 Entirely agree 2 Mostly agree 3 Somewhat agree 4 Neither agree nor disagree 5 Somewhat disagree 6 Mostly disagree 7 Entirely disagree
company_confidence	T-Systems is a company that I trust.	
admire_and_trust	T-Systems is a company that I admire and respect.	
company_reputation	T-Systems has a good overall reputation.	
age	Age	1 15 - 19 years 2 20 - 24 years 3 25 - 29 years 4 30 - 34 years

		5 35 - 39 years 6 40 - 44 years 7 45 - 49 years 8 50 - 54 years 9 55 - 59 years 10 60 - 64 years 11 65 - 69 years 12 70 years and more
gender	Gender	0 Female 1 Male
residence	Residence	1 Kosice City district 2 Kosice City district 3 SNV district 4 Trebisov district 5 Gelnica district 6 Michalovce district 7 Roznava district 8 Sobrance district 9 Other district
education	Education	1 Elementary 2 High school 3 Undergraduate 4 Postgraduate 5 Phd.
occupation	Occupation	1 Student 2 Unemployed 3 Employed 4 Self-employed 5 Retired

Dear Respondent,

Please, let me interrupt you for a while and ask you to complete the following short questionnaire. Your responses are anonymous and will be used for the purposes of my master thesis.

Tick only one option.

1. Have you heard about T-Systems Slovakia (further T-Systems)? ❑Yes ❑ No

2. Are you employed at T-Systems? ❑Yes ❑ No

3. Do you know any employee of T-Systems? ❑Yes ❑ No

4. What business would you say T-Systems is in?

_____

5. What products or services do you think T-Systems offers?

_____

6. Do you agree with the following statements?	**Agree**						**Disagree**
Presence on the local market	**1**	**2**	**3**	**4**	**5**	**6**	**7**
T-Systems is one of the biggest companies in Eastern Slovakia.	❑	❑	❑	❑	❑	❑	❑
T-Systems is one of the biggest IT companies in Eastern Slovakia.	❑	❑	❑	❑	❑	❑	❑
T-Systems is one of the biggest employers in Eastern Slovakia.	❑	❑	❑	❑	❑	❑	❑
T-Systems has perspective for the future in Eastern Slovakia.	❑	❑	❑	❑	❑	❑	❑
Citizenship	**1**	**2**	**3**	**4**	**5**	**6**	**7**
T-Systems supports development of the local community.	❑	❑	❑	❑	❑	❑	❑
T-Systems supports development of Kosice Region.	❑	❑	❑	❑	❑	❑	❑
T-Systems is an environmentally friendly organization.	❑	❑	❑	❑	❑	❑	❑
T-Systems cares about its employees.	❑	❑	❑	❑	❑	❑	❑
T-Systems is an ethical and responsible organization.	❑	❑	❑	❑	❑	❑	❑
Workplace	**1**	**2**	**3**	**4**	**5**	**6**	**7**
T-Systems offers its employees high salary.	❑	❑	❑	❑	❑	❑	❑
T-Systems offers its employees high benefits.	❑	❑	❑	❑	❑	❑	❑
T-Systems is an attractive employer.	❑	❑	❑	❑	❑	❑	❑
I would like to work at T-Systems.	❑	❑	❑	❑	❑	❑	❑

7. Do you agree with the following statements? **Agree** **Disagree**

Performance	**1**	**2**	**3**	**4**	**5**	**6**	**7**
T-Systems manages well its finances.	❑	❑	❑	❑	❑	❑	❑
T-Systems is a profitable organization.	❑	❑	❑	❑	❑	❑	❑
Communication	**1**	**2**	**3**	**4**	**5**	**6**	**7**
I evaluate positively communication of T-Systems with the public.	❑	❑	❑	❑	❑	❑	❑
I evaluate positively communication with T-Systems.	❑	❑	❑	❑	❑	❑	❑
I evaluate positively communication channels that T-Systems uses to communicate with the public.	❑	❑	❑	❑	❑	❑	❑
Overall evaluation	**1**	**2**	**3**	**4**	**5**	**6**	**7**
T-Systems is a company I have a good feeling about.	❑	❑	❑	❑	❑	❑	❑
T-Systems is a company that I trust.	❑	❑	❑	❑	❑	❑	❑
T-Systems is a company that I admire and respect.	❑	❑	❑	❑	❑	❑	❑
T-Systems has a good overall reputation.	❑	❑	❑	❑	❑	❑	❑

8. Age:

- ❑ 15 - 19 years
- ❑ 20 - 24 years
- ❑ 25 - 29 years
- ❑ 30 - 34 years
- ❑ 35 - 39 years
- ❑ 40 - 44 years
- ❑ 45 - 49 years
- ❑ 50 - 54 years
- ❑ 55 - 59 years
- ❑ 60 - 64 years
- ❑ 65 - 69 years
- ❑ 70 years and more

9. Gender:

- ❑ Male
- ❑ Female

10. Residence:

- ❑ Košice Mesto District (Košice I - IV)
- ❑ Košice Suburbs District
- ❑ Spišská Nová Ves District
- ❑ Trebišov District
- ❑ Gelnica District
- ❑ Michalovce District
- ❑ Rožňava District
- ❑ Sobrance District
- ❑ Other District

11. Highest education finished:

- ❑ Elementary
- ❑ High school
- ❑ Undergraduate
- ❑ Postgraduate
- ❑ PhD.

12. Occupation:

- ❑ Student
- ❑ Unemployed
- ❑ Employed
- ❑ Self-employed
- ❑ Retired

Thank you for your time.