

# MODELLING TRUST DIMENSIONS ON SOCIAL MEDIA

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**Abstract.** Trust plays an important role in social media communication. For companies, trust is an important determinant of successful online communication. Thus, there is a pressing need to understand consumers' trust in the socially mediated environment This paper presents a research study focused on modelling trust dimensions on social media. The main objective of this research is to identify which dimensions of trust play the most significant role in building trust in communication on social media. The second objective is focused on the development and validation of the five-factor trust measurement scale. A questionnaire survey (n = 1000) was used as a tool to gather data. Exploratory factor analysis, confirmatory factor analysis and multiple regression analysis were used for data analysis and modelling. The research findings provide a deeper understanding of the factors that influence trust in the context of social media communication and expand existing knowledge. The conducted research uncovers the main trust dimensions that can be used to influence consumers' attitudes toward companies operating online. Our model can help companies shape their communication to the right tone by highlighting the crucial factors that have a direct influence on trust.

Keywords: trust, trust dimensions, social media, communication, online behaviour, modelling.

JEL Classification: C38, D83, M10.

# Introduction

Trust is the basic prerequisite for successful communication (Nieto et al., 2014). Nieto et al. (2014) further note that trust has shifted to the online environment in recent years. While earlier people trusted their loved ones the most, they now trust the contributions of strangers on the Internet, too. Therefore, in today's business world whose main characteristics are high globalization and high competition, the role of social media is increasing. The cognitive perspectives of trust and online trustworthy behaviour have recently become a new research interest among researchers focusing on behaviour research (e.g. Warner-Søderholm et al.,

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This is an Open Access article distributed under the terms of the Creative Commons Attribution License (http://creativecommons. org/licenses/by/4.0/), which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited. 2018; Russmann & Hess, 2020; Karlsen & Aalberg, 2021). Therefore, more research focused on how people communicate in both business and society is needed (Häkansson & Witmer, 2015). In comparison to traditional communication mediated by computers, communication on social media focuses on social connections and relationships, thus building trust varies from other contexts (Kimmel & Kitchen, 2014; Westerman et al., 2013). On the one hand, trustworthiness in communication on social media is essential, while on the other there is a growing problem in online communication and in human behaviour related to social media and so-called fake news and other inappropriate behaviour online.

In recent years, several studies have tried to identify trust dimensions and their importance in building trust (e.g. Corritore et al., 2003; Cheng et al., 2017; Oliveira et al., 2017). However, these studies were either theoretical or there has been a lack of empirical research in trust. Corritore et al. (2013) tried to approach the topic of trust from a theoretical perspective only. Cheng et al. (2017) and Oliveira et al. (2017) employed small samples in their studies (n = 115 and n = 365), moreover, both studies used convenience samples. One of the latest models was presented by Warner-Søderhorm et al. (2018). In this study, a small convenience sample (n = 214) was used as well. The authors call for further research to outline international differences in trust dimensions due to their claim that cross-cultural differences in building trust are probable to appear across cultures. We have answered this call. Additionally, to extend the knowledge in trust-related research, we employ a larger representative sample to get a deeper insight into which dimensions affect trust the most.

The main purpose of this study is to identify which dimensions of trust play the most significant role in building trust in communication on social media. Second, we investigate whether gender, age, or social media use affects one's perceptions of trust. Third, we develop and validate the five-factor trust measurement scale, which was proposed by Warner-Søderhorm et al. (2018). We believe that the conducted research provides deeper understanding and reveals potentially significant findings related to social media and human behaviour in relation to important features such as age, gender and participants' social media usage in their lives.

The paper proceeds as follows. At the beginning of this paper, a literature review on social media and trust is presented, followed by a research question and hypotheses. Next, the research methodology, including objectives, is presented. This is followed by a section with the research analysis and results. Then follows a section that contains a conclusion and a discussion. Finally, implications and limitations are presented.

# 1. Social media use

Social media applications influence many aspects of human life and are used as an effective instrument that contributes to companies' marketing goals and strategies, especially in aspects related to customer involvement, customer relationship management and interactive two-way communication (Alalwan et al., 2017; Kingsnorth, 2019). Social media can support communication and help to improve social relationships (Cheng et al., 2017). Improvement of relationships leads to greater trust, as has been implied earlier (e.g., Dietz & Den Hartog, 2006; Grabner-Kräuter & Bitter, 2015; Liu et al., 2018; Valenzuela et al., 2009). Social networking stresses online creation and the need to maintain personal and business relationships (Hanna et al., 2011; Kietzmann et al., 2011).

Social media (SM) provide friendly tools for users and support their connection, communication, interaction and networking through social media sites. In comparison to standard computer-mediated communication, SM communication focuses on more personal aspects of life (Alalwan et al., 2017; Hanna et al., 2011; Meraz, 2009).

In the European Union, almost 55% of people aged between 16–74 years use the Internet for social network participation (Eurostat, 2020a). As for Internet habits, women use social media more than men (65% vs 61%) (Eurostat, 2020c).

An increasing percentage of companies are establishing and maintaining an interactive online presence consisting of two-way communication and attractive content to better fulfill the needs and wishes of their current and potential customers (Hudson et al., 2016; Vendemia, 2017; Williams & Hausman, 2017). SM have become a prevailing channel for online communication where customers can find information about companies, share this information and also interact with companies they consider purchasing products from (Hudson et al., 2016; Kingsnorth, 2019). In the European Union, 53% of enterprises used at least one platform of social media, with 86% of these businesses using social media to market products and for building their image (Eurostat, 2020b).

SM facilitate communication between companies and their customers. Electronic word of mouth (eWOM) has a great influence on customers and it is considered the most effective strategy in online communication. Several research studies have revealed that using SM platforms results in higher impact and pervasiveness of WOM relative to traditional communication tools (Alalwan et al., 2017; Hudson et al., 2016; Vendemia, 2017). SM enable two-way communication, which enables companies to learn about and comprehend the needs and wishes of their customers. Two-way communication further encourages companies to address those needs in a proactive and efficient manner (Eger & Mičík, 2017; Tajudeen et al., 2018). Trust is one of the antecedents of performance in the business world and can be used for the facilitation of effective online communication (Edelman Trust Barometer, 2021; Cheng et al., 2017; Häkansson & Witmer, 2015; Liu et al., 2018).

# 2. The concept of trust

Trust is one of the key factors which decisively affects performance in the business area and a high level of trust can facilitate successful online communication (Cheng et al., 2017). Trust is generally acknowledged as a fundamental element of human social relationships and serves as an indicator of these relationships. Currently, it is very important to explore trust building in the Internet environment (cf. Edelman Trust Barometer, 2021). Theories based on psychology and sociology are the basis for our research in this new area of human communication (Sherchan et al., 2013; Warner-Søderholm et al., 2018).

The older concept of trust in relation to firms by Geyskens et al. (1996, p. 307) was built on two basic dimensions. Trust encompasses two key components – "trust in the partner's honesty and trust in the partner's benevolence". Other research by Mayer et al. (1995) and Colquitt et al. (2007) found different dimensions of trust – benevolence, integrity and ability. Another approach to trust was presented by Sherchan et al. (2013). They categorized trust literature based on three criteria, trust information collection, trust value assessment, and trust value dissemination, and each of them was further classified. Hence, the following part provides an overview of various approaches toward trust and its definition between organizations and customers. We are in line with McKnight and Chervany (2001), who argued that trust is a highly complex and multi-dimensional phenomenon.

In this research, trust is operationalized according to Warner-Søderholm et al. (2018, p. 304). The research tool uses the following dimensions of trust: Benevolence, Integrity, Competence, Identification, and Concern (see below for detailed information about the research tool).

- Benevolence is one of the most common categories of trust. Benevolence is defined as "one securely believes the other person cares about one and is motivated to act in one's interest" (McKnight & Chervany, 2001, p. 36). Benevolence is based on the relationship between the trustee and trustor. This means that two parties act willingly in one another's interest. People who join online communities are seeking social support and friendships in these communities (Warner-Søderholm et al., 2018). They perceive not only informational but also social support. Benevolence can improve the quality of relationships and further develop and strengthen social relationships (Lee et al., 2015). Research carried out by Warner-Søderholm et al. (2018) showed that social media is a significant factor for Benevolence.
- According to Miller and Schlenker (2011) *Integrity* consists of various important characteristics including honesty, strength, and virtue. Integrity supports social relationships in communities including communication on the Internet.
- Competence is the next pillar of the trust construct by Warner-Søderholm et al. (2018) and is defined as having the ability or power to do what needs to be done for some-one. Trust in the competence of other people means that we believe they are able to accomplish the task. In the social media context, it is critical that all users show competence in the content they create and share (Warner-Søderholm et al., 2018). As it is also about the use of ICT for communication between people, ICT competence must be part of this area.
- *Identification* means how an individual identifies themselves within an organization or group. Edwards (2005) states that several studies have shown a connection between prestige and the perceived image of an organization and individuals who identify with it.
- The last pillar in this 5-factor trust construct is *Concern* as an important factor that connects individuals and provides a foundation for trust (Dietz & Den Hartog, 2006; Shockley-Zalabak et al., 2000). People need to meet empathy and tolerance also in the virtual space that support commitment with their online community. Also in this area, the results of research carried out by Warner-Søderholm et al. (2018) indicate that social media usage is a significant factor and people who used SM a few times a day or more often had significantly higher expectations for Concern.

Trust begins to be a fundamental element in social networking sites (Sherchan et al., 2013). Considering the area covered by social networking sites and the impact they have on

people, building trust becomes essential (Schmidt & Iyer, 2015). The underlying principle of many social networks is that social networks are built on relationships (e.g., Dietz & Den Hartog, 2006; Grabner-Kräuter & Bitter, 2015; Valenzuela et al., 2009). An example of such a relationship on social networks is "friendship" and the foundation of every friendship is trust (Sherchan et al., 2013). Thus, the following research question (RQ) is framed based on literature:

*RQ*: *Do social media users' perceptions of trust differ significantly with respect to their gender, age, and social media usage?* 

Based on the theory of trust and basic information about social media use outlined above, the following hypotheses were framed in order to investigate whether there is a statistically significant difference in perceptions of factors' importance between men and women (H1), whether there is a statistically significant influence of age on perceptions of factors' importance (H2) and whether there is a statistically significant difference in perception of factors' importance based on social media use by users (H3):

H1: There is a difference in perception of trust dimensions' importance between females and males.

*H2*: *There is a difference in perception of trust dimensions' importance among different age groups.* 

H3: There is a difference in perception of trust dimensions' importance according to social media use.

# 3. Methodology

In order to pursue the research objective – i.e., to identify which dimensions of trust play the most significant role in trust building in communication on the Internet, we decided to adopt a quantitative research approach (Creswell, 2014). The research follows the study by Warner-Søderholm et al. (2018) focused on trust and social media and expands our knowledge by collecting and analysing empirical data on specific variables of trust combined with the use of ICT by people during their leisure-time activities.

The undertaken research is quantitative and cross-sectional. The research aims to examine these partial research objectives. The first objective is to identify trust dimensions that play the most significant role in building trust in communication on the Internet. The second objective is the development and validation of the five-factor trust measurement scale. Our third objective is to examine how gender, age or social media usage affects one's perception of trust.

# 3.1. Sample and data collection

The research sample for the questionnaire survey consisted of adults (aged 18+) residing in the Czech Republic. To adhere to the usual size for surveys within the Czech Republic, the sample size was set at 1,000 respondents (cf. Centrum pro výzkum veřejného mínění [CVVM], 2021). All the participants were informed about the nature of the study. The primary data were collected using an online panel at the beginning of 2020, i.e., several months before the worldwide Covid-19 pandemic broke out. Talk Online Panel (TOP) is a member of ESOMAR and adheres to its guidelines (Talk Online Panel, 2019). TOP tracks the demographic attributes of respondents in detail, which allows the selection of respondents according to the required sample selection characteristics. Thus, by using quota sampling (cf. Burns et al., 2017), adequate distribution of respondents in the sample according to the basic population characteristics (e.g. gender, age, region) could be ensured. From this point of view, the research sample could be considered representative of the Internet population in the Czech Republic, where almost 90% of Czechs used the Internet in 2019 (Eurostat, 2020d).

The number of respondents in the sample was 1000. Data were scrubbed especially with respect to extreme values (outliers). Of a total of 1000 distributed questionnaires, 936 questionnaires were completed. The final characteristics of the research sample follow: 472 were females and 464 males with an average age of 40.51 years (SD = 13.11). The age of the participants ranged from 18 to 65, years with a median age of 41. The average age of females was 40.02 (SD = 13.54), and the average age of males was 41.02 (SD = 12.67).

### 3.2. Instrument

The research design was inspired by the trust model proposed by Warner-Søderholm et al. (2018). We applied the 5-factor instrument by Warner-Søderholm et al. (2018) that contains the following dimensions of trust – Benevolence, Integrity, Competence, Identification, and Concern.

Respondents were asked to indicate to what extent the listed items described them best in the matter of building trust on the internet. Responses were given on a five-point Likert scale (1 = "strongly disagree"; 5 = "strongly agree").

#### 3.3. Data analysis methods

To find a structure in the collected data and explore the most suitable model for the data, exploratory factor analysis (Mayers et al., 2010) was used. For this purpose, a total-item correlation was first determined for every item as a first step. Then, the sampling adequacy of the items was examined using the Kaiser–Meyer–Olkin test (KMO) and Bartlett's test of Sphericity at the same time (Kaiser, 1974).

To validate the proposed model, confirmatory factor analysis (Harrington, 2009) was used. Path Analysis was used for model construction and confirmation.

The output of factor analysis creates a new data structure in the form of new variables. The following research examines the impact of Gender and Age factors on the values of these new variables. The effect is examined by the Mann-Whitney test for each variable in the case of the Gender factor (which contains two levels – female and male) and the Kruskal-Wallis test (non-parametric ANOVA) with post-hoc analysis in the case of the Age factor (which contains several levels that represent individual age groups).

To test the impact of the individual independent variables (factors) represented by new variables on the dependent variable Trust in the proposed model, regression analysis was used. The assumptions of the multiple regression model, especially multicollinearity, were verified using VIF and Durbin-Watson test for autocorrelation in the residuals was performed. Then, the test of the significance of the individual coefficients was performed (Draper & Smith, 1998).

Statistical analyses were performed in statistical software R.

# 4. Results

The first step of the analysis was a calculation of the item-total correlation for every item. No item was eliminated; the value was greater than 0.3 for all items. Next, the sampling adequacy of the items was checked via the KMO (the Kaiser–Meyer–Olkin) test. A value of 0.96 indicates that the factor analysis was appropriate for our data. For the determination of the data suitability and relevance, Bartlett's Test of Sphericity was used. It showed a significant value of 0.000, indicating p < 0.05. Thus, it shows that the correlation between items is sufficient to run the factor analysis (Eger et al., 2019).

Subsequently, a principal component analysis with Raw Varimax rotation was used, and a factor extraction with respect to the MINEIGEN criterion was employed. In the sample data, the five components (factors) accounted for a cumulative 66% of the variation. The initial eigenvalues and rotated component matrix are shown in Tables 1 and 2. The items are sorted by loading, and factor loadings < 0.45 are suppressed.

Component	Eigenvalues	% variance	Cumulative %
1	10.335	0.26	0.26
2	1.475	0.16	0.42
4	0.551	0.11	0.53
3	0.398	0.06	0.60
5	0.343	0.06	0.66

Table 1. Initial eigenvalues (source: own research)

The 5-factor model was used first for FA. These factors were borrowed from the study by Warner-Søderholm et al. (2018) as follows: Benevolence (B), Integrity (In), Competence (Com), Identification (Id) and Concern (Con). Both the Kaiser–Meyer–Olkin test and Bartlett's test of sphericity support the use of factor analysis (KMO = 0.96, Bartlett test of sphericity: p-value = 0). The quality of the model is good (RMSEA = 0.058, CFI = 0.98, TLI = 0.95). The results of our factor analysis grouped items in the following order (see Table 2): Our factor 1 consists of integrity and competence items, both groups are represented equally. Factor two contains one item from integrity, one from competence, one from concern and one from benevolence. Concern items represent a majority in factor 4, the rest of this factor is represented by two identity items. Factor 5 consists of three benevolence items and factor 3 consists of two identity items. In our study, factors 1 and 2 (consisting mostly of integrity and competence items) explain 42% of the variation.

The column labeled "factor" shows the initial categorization of items according to the respective dimensions in Warner-Søderholm et al. (2018), and initial items and labels are numbered as in their paper. The labels of each item are part of the Appendix.

Original item	Factor	MR1	MR2	MR4	MR5	MR3	h2	u2
Q12_5	In	0.60					0,64	0,36
Q12_6	In	0.73					0.72	0.28
Q12_7	In	0.82					0.71	0.29
Q12_9	Com	0.65					0.53	0.47
Q12_10	Com	0.75					0.64	0.36
Q12_11	Com	0.86					0.72	0.28
Q12_8	In		0.88				0.67	0.33
Q12_20	Con		0.78				0.68	0.32
Q12_12	Com		0.66				0.55	0.45
Q12_4	В		0.66				0.65	0.35
Q12_18	Con			0.70			0.76	0.24
Q12_17	Con			0.54			0.74	0.26
Q12_19	Con			0.53			0.66	0.34
Q12_15	Id			0.69			0.71	0.29
Q12_14	Id			0.52			0.58	0.42
Q12_3	В				0.66		0.78	0.22
Q12_2	В				0.58		0.63	0.37
Q12_1	В				0.41		0.47	0.53
Q12_13	Id					0.72	0.60	0.40
Q12_16	Id					0.50	0.66	0.34

Table 2. Factor analysis of items (source: own research)

Notes: h2 - communality; u2 - uniqueness.

In all cases, the spectral analysis shows only two values (eigen values) greater than 1. In the factor analysis for only 2 factors (MR1 and MR2) the rotation (transformation) to 2-factor coordinate space is satisfactory, but the CFI index of the model quality does not show such a quality model, as in the previous case with 5 factors (RMSEA = 0.089, TLI = 0.89, CFI = 0.92). For obvious reasons, it also explains the lower percent of variability (58%) compared to 66% of the previous 5-factor model.

Data representations using basic characteristics given by descriptive statistics were used for comparisons.

In the following text, t-tests and Mann-Whitney tests are used as two-sample tests to analyse if differences exist in the perceived level of trust on social media in age, gender and social media use.

To test the formulated hypotheses, the survey data were divided according to gender, age and social media use. For every hypothesis, five tests were performed, one for each factor of trust. Due to the non-normality of all the sample couples, the non-parametric Mann–Whitney test was used (Mayers et al., 2010).

All the basic parameters were calculated for every sample and factor. The results, accompanied by t-tests, are reported in Tables 3–6, including p-values for each individual factor.

Data are represented by medians. The individual observed variables are assigned to the factors based on the results in the study by Warner-Søderholm et al. (2018), i.e. Benevolence Q12\_1 – Q12\_4, Integrity Q12\_5 – Q12\_8, Competence Q12\_9 – Q12\_12, Identification Q12\_13 – Q12\_16, Concern Q12\_17 – Q12\_20.

Table 3. Mean trust dimensions scores and significance values: Comparisons by gender (source: own research)

	Benevolence	Integrity	Competence	Identification	Concern
Male	2.5	2.53	2.45	2.52	2.54
Female	2.35	2.44	2.33	2.35	2.43
Signi t	0	0.018	0.001	0	0.006
Signi M-W	0	0.014	0.004	0	0.004

Based on the results in the table above, males scored significantly higher in every construct than females. In general, the results can be interpreted that men show a higher level of trust in communication on social media. H1 is therefore supported.

The respondents were divided into 6 age groups that are typical for the age distribution of internet and social media users (cf. Statista, 2021).

Mean/Median	Benevolence	Integrity	Competence	Identification	Concern
18-24	2.30 (2.25)	2.47 (2.5)	2.36 (2.25)	2.30 (2.25)	2.48 (2.25)
25-34	2.45 (2.5)	2.50 (2.25)	2.38 (2.25)	2.41 (2.25)	2.50 (2.25)
35-44	2.46 (2.25)	2.51 (2.25)	2.40 (2.25)	2.50 (2.5)	2.50 (2.25)
45-54	2.49 (2.25)	2.52 (2.5)	2.41 (2.25)	2.50 (2.5)	2.52 (2.5)
55-64	2.55 (2.25)	2.52 (2.25)	2.46 (2.25)	2.51 (2.25)	2.55 (2.25)
65+	2.62 (2.62)	2.59 (2.38)	2.48 (2.38)	2.62 (2.75)	2.61 (2.5)

Table 4. Mean (median) trust dimensions scores: Comparisons by age (source: own research)

The means (medians) of trust dimensions for the age groups are presented in Table 4. The table shows interesting results. As the age increases, the values in the table for each dimension of trust increase. The results can be interpreted in such a way that with increasing age, people believe communication on social media more. The most reserved from the point of view of trust are respondents belonging to the age group 18–24. The next task is to compare the median scores of the respondents and determine whether statistically significant differences exist.

The Kruskal–Wallis test was employed, and post-hoc analysis (multiple testing) was applied (Mayers et al., 2010). The p-values in Table 5 of the Kruskal–Wallis test partially support hypothesis 2. The five factors are independent of each other, and normality was not proved in any factors. The p-values of the Kruskal-Wallis analysis with respect to age are reported in Table 5.

	Benevolence	Integrity	Competence	Identification	Concern
Sign	0.05	0.6898	0.8504	0.02959	0.9287

Table 5. P-values of the Kruskal-Wallis test with respect to age (source: own research)

The p-values in the multiple testing show that a statistically significant difference among age groups exists in benevolence and identification. Hypothesis H2 was confirmed only partially; age influences only the dimensions of benevolence and identification.

Table 6. Mean (median) trust dimensions scores: comparisons of social media activity (source: own research)

	Benevolence	Integrity	Competence	Identification	Concern
Low ≤3	2.39 (2.25)	2.47 (2.25)	2.40 (2.25)	2.44 (2.25)	2.48 (2.25)
High ≥4	2.44 (2.25)	2.49 (2.5)	2.38 (2.25)	2.43 (2.25)	2.49 (2.5)
Sign t	0.335	0.774	0.745	0.876	0.842
Sign M-W	0.168	0.293	0.677	0.575	0.378

Table 6 shows the results of the analysis focused on social media activity. The values are accompanied by the results of t-tests and M-W tests. Based on activity on social media and the perceived degree of trust in communication on social media, no significant differences were identified. H3 was not confirmed.

### CFA (Confirmatory factor analysis) models

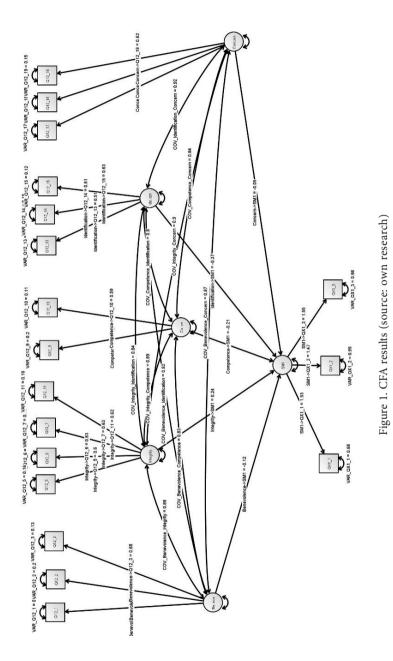
For further analysis, CFA was used to build a model with one latent variable SM1, representing trust in social media. This latent variable is the source for the observed variables QX1\_1 – QX1\_3. Out of the total number of 11 tested models, the following model (Figure 1) best describes our data. This model was created on the basis of two aspects, namely by assigning a selection of the original questions to individual factors based on the results of exploratory factor analysis (see Table 2) and on the basis of quality indices CFI, TLI, RMSEA by selecting from 11 tested models.

The quality of the model is confirmed by the following indices (RMSEA = 0.056, SRMR = 0.031, CFI = 0.97, TLI = 0.967), however, the subsequent regression analysis shows that only some of the considered factors are significant.

#### Multiple regression analysis

The selected model is also most suitable for our data based on the significance of regression coefficients. The model shows a significant effect for the variables Integrity, Competence and Identity. For Benevolence and Concern, there is no effect on the latent variable SM1.

Table 7 shows that the dimensions of integrity, competence and identification have the greatest effect on trust. On the other hand, benevolence as a dimension for establishing a relationship has no significant influence on our construct, the same applies to the dimension concern in the focus on empathy. People who join online communities are seeking social support and friendships in these communities. This notion is in contradiction with our model.



Dimension	Estimate	Std. Err	z-value	P(> z )
Benevolence	-0.092	0.119	-0.777	0.437
Integrity	0.496	0.167	2.967	0.003
Competence	-0.352	0.132	-2.673	0.008
Identification	-0.363	0.154	2.367	0.018
Concern	-0.108	0.205	-0.527	0.599

Table 7. Regression analysis results (source: own research)

# 5. Discussion

First, to analyze the data, the model proposed by Warner-Søderholm et al. 2018 was used. The KMO test and Bartlett test of sphericity support the use of factor analysis; KMO = 0.96, Bartlett test of sphericity: p-value = 0. The quality of the model is good, RMSEA = 0.058, CFI = 0.98, TLI = 0.95. The five factors accounted for a cumulative 66% of the variation in the sample data.

Based on the data we found that men score significantly higher in every dimension of trust than women. In general, these results can be interpreted that men show a higher level of trust in communication on social media. Hypothesis 1 is therefore supported. This finding is completely different from the results by Maddux and Brewer (2005) and Warner-Søderholm et al. (2018). In their research, women scored higher in all five dimensions of the construct.

Our research has shown a significant relationship between trust and age. Specifically, the relationship between age and benevolence and age and identification was found. A similar conclusion was also reached by Hubbard et al. (2016). In their research, they found that benevolence is strongly tied to age. That could be interpreted as the older the people are, the more benevolent they become. Identification with the group allows members to make efforts on behalf of the group. Also, members of the group usually compare their group with others and see their group more positively. Specifically, individuals prefer to seek a positive identity, meaning that once they are in their group, they will perceive it as more positive than others and their evaluation of the co-members in their group will be more favorable (Turner, 1981; Tsai & Hung, 2019). In the end, identification with the group results in feeling safe and positive emotions toward the co-members. Thus, co-members are likely to be perceived as more trustworthy (Voci, 2006). As our results indicate, identification is a significant factor of social media trust. This result is in line with Hsu et al. (2012), who also claim that trust is significantly derived from identification. In case of the remaining dimensions of trust (concern, integrity and competence) only insignificant relationships were identified. Hypothesis 2 was therefore supported only partially.

Our research showed a growing trend of values for all dimensions (constructs) of trust. This growth was associated with increasing age. The results can be interpreted in such a way that with increasing age, people trust communication on social media more. The most reserved from the point of view of trust were respondents belonging to the youngest group, aged 18–24. Most trusting were respondents belonging to the oldest group, aged 65+. One possible explanation for elderly people being more trusting could be that as a

result of limited time perspective, one of their priorities is to connect emotionally with others. To reach emotional security, they may even enhance their trust toward others (Li & Fung, 2013). Elderly people are also more tolerant and forgiving (Cheng & Yim, 2008; Steiner et al., 2011).

Social media activity in our research did not show any significant effect on the construct of trust. Although some research identified a certain influence of social media activity on trust (e.g. Warner-Søderhorm et al., 2018), we did not confirm this in our research. We expected that certain online activities (reading news on social media, using social media for education, searching for information about products on social media) would have an influence on trust in social media. However, no such influence was identified. Hypothesis 3 was therefore not supported.

Subsequently, we tried to build a model that could best describe the data we collected. For modelling, CFA was used. Although the quality of the model is confirmed by the indices (RMSEA = 0.056, SRMR = 0.031, CFI = 0.97, TLI = 0.967), the subsequent regression analysis shows that only some of the considered factors are statistically significant. The dimensions of integrity, competence and identification were identified as important factors influencing trust on social media, while benevolence and concern proved to be insignificant. Compared to the results from the factor analysis, these are significantly different results. These results are also inconsistent with the results of other research, where benevolence, integrity and competence have been identified as the main dimensions of trust (Hwang & Lee, 2012; Lankton & McKnight, 2011; Oliveira et al., 2017; Qin, 2020).

Integrity is closely associated with a reputation (Park et al., 2014) and in our model, it is one of three central dimensions that constitute trust. Integrity's role as one of the essential dimensions was confirmed in several research papers (e.g. Svare et al., 2020; Oliveira et al., 2017; Sung et al., 2016). Moreover, integrity has been identified as a significant factor in internet behaviour (Jarvenpaa et al., 2006; Warner-Søderholm et al., 2018) which is also in line with our results. Competence represents another significant factor that we identified with a direct influence on trust.

One factor that did not present any statistical significance for trust in any of the analyses we made was concern. Concern has been analysed many times as a factor influencing trust. In some research, it has been identified as having an influence on trust on social media (e.g. Chang et al., 2017), whereas in some studies the influence of concern was not significant (Ayaburi & Treku, 2020). With our results, we lean towards the latter.

For companies, trust is one of the antecedents of performance in the business world and can be used for the facilitation of effective and successful online communication on social media. Trust is also a significant factor affecting online disclosure (Lin et al., 2016). Establishing a relationship between a consumer and a seller is a foundation for sealing online purchases. When a business is trustworthy and reputable, consumers are more willing to disclose their personal data in e-commerce transactions (Robinson, 2017). There is a pressing need to understand consumers' trust in the socially mediated environment. There are countless factors that can affect consumers' attitudes and trust is one of them. The present study showed the main trust dimensions that can be used to influence consumers' attitudes toward companies operating online. Our model can help companies shape their communication to the right tone by highlighting the crucial factors that have a direct influence on trust. Companies can also use an established relationship for its positive effect on social commerce (Chen & Shen, 2015; Yahia et al., 2018). Moreover, eWOM and purchase intentions are positively affected by trust (cf. Meilatinova, 2021). The results of this research can also be used by practitioners and marketing experts in formulating and executing their communication strategies.

There is no simple explanation of why the results of our study differ from many other research studies mentioned in our paper. One of the many reasons is of course the different methodology and approach towards the problematics of social media and trust. Other reasons may stem from different cultures. There has been a number of studies comparing results from a multi-national perspective (e.g. Arai et al., 2005; Chen & Tsoi, 2011; Igarashi et al., 2008; Qin, 2020) and new studies from different cultural context and in contemporary social media development will probably bring new knowledge.

### 5.1. Implications

The research findings provide deeper understanding of the factors that influence trust in the context of social media communication. Specifically, we have identified trust dimensions that play the most significant role in building trust in communication on social media. Moreover, we also believe that this research has extended the research context of trust in online communication by employing a larger quota sample to get a deeper insight into what dimensions affect trust the most in a specific environment.

Our findings can be beneficial from several perspectives. First, the research contributes to the literature on online trust on social media. Second, the findings highlight the positive impact of gender on the dimension of trust. However, this result is in contrast to the previous studies carried out by Warner-Søderholm et al. (2018) and Maddux and Brewer (2005) and suggests that in general females trust social media less than males. Further, trust on social media rises with age, the older the people were, the more benevolent they became. The findings have shown that the greatest attention should be paid to the dimensions of benevolence and identification.

Apart from the above-mentioned contributions, the present study takes into account the Czech context. To the best of our knowledge, no such research has been attempted in the Czech Republic. This also fills an existing gap in the literature. We hope that the conducted research can provide useful insights to researchers and practitioners who can build their research on the basis of this paper.

# Conclusions

Trust is an important determinant of successful online communication on social media and dimensions of trust play a significant role in building trust in communication on social media. This research investigated whether social media users' perceptions of trust differ with respect to their gender, age and social media usage. The research carried out in Czech context found that men score significantly higher in every dimension of trust than women. Further, trust on social media rises with age, the older the people were, the more benevolent they became. The findings have shown that the greatest attention should be paid to the dimensions

of benevolence and identification. On the other hand, social media activity did not show any significant effect on the construct of trust. The research contributes to the understanding of interpersonal relationships in the context of social media communication. The created model can help companies shape their communication to the right tone by highlighting the crucial factors that have a direct influence on trust. The results underline the main trust dimensions that can be used to influence consumers' attitudes toward companies operating online.

Several limitations of this research must be considered. First, the results of this research cannot be generalized. Because we collected data only from the Czech Republic, it is quite probable that the current results would not generalize to populations in other countries. To establish generality, more research in other locations is needed. Furthermore, this research relies on self-reported survey data. Even though the questionnaire was carefully developed, tested and multiple items were used to construct our variables, respondents' memory bias is unavoidable. The data were obtained using quota sampling and an online panel in the selected country. Previous findings have shown that quota sampling cannot produce representative samples similar to those produced by probability sampling.

This research raises the question of whether the model employed in our study would be suitable in other countries. Future research using the same methodology carried out in other countries will provide data for multicultural comparison and possibly uncover similarities and differences in trust dimensions that affect building trust in communication on social media. Also, since the data were collected several months before the worldwide Covid-19 pandemic broke out, the results do not show the influence of the pandemic. Future research could bring different results affected by the pandemic.

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### Author contributions

All authors contributed to this work.

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# APPENDIX

Table 1A. Labels of questions Q12\_1 – Q12\_20 (source: own research)

I believe that friends in my social network (e.g. Facebook) would act in my best interest.

If I need help, friends in my social network do their best to help me.

I believe that friends in my social network care about my well-being.

In general, social networks like Facebook are here for the sake of people, and try to serve them well.

I believe that people in my social network are truthful in their communication with me.

I can characterize people in my social network as honest.

I can rely on promises made by people in my social network.

In general, social networks like Facebook strive to provide truthful information.

I believe that people in my network are able to provide me with important information.

People in my social network are effective in providing helpful advice.

People in my social network are reliable in doing what they say will be done.

In general, social networks like Facebook are a competent tool for providing information.

I feel connected to people in my social network.

My values are similar to the values of people in my social network.

People in my social network listen to me.

In general, social networks like Facebook are a good tool for creating and maintaining relationships with people.

People in my social network are sincere in their efforts to communicate with me.

People in my social network are concerned about my personal well-being.

People in my social network show interest in the content of my communication.

In general, social networks like Facebook care about how social networks serve people.