THE PROPOSAL OF A TOOL FOR CANDIDATE'S SELECTION FOR EMPLOYMENT: THE CASE OF SURVEY INTERVIEWERS

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Abstract

This study purpose is a questionnaire development used to quantify survey interviewer characteristics. Five dimensions of personality were used: conscientiousness, extraversion, agreeableness, emotional stability and openness. Those dimensions were measured using a Likert scale with 6 points. In total, 107 survey interviewers from a branch of private companies specialized in public opinion research answered the questionnaire's questions. Reliability of the questionnaire was assessed by internal consistency. A preliminary list of 25 items was prepared as a starting point. After evaluation of validity, five items were rejected. The new measurement instrument with 20 items was finally developed. The content validity index for the final questionnaire was found acceptable. Results showed that final questionnaire was internally consistent.

Keywords: survey interviewer, characteristics of personality, questionnaire, reliability, validity

JEL Classification: C83, J21, J24

1. Introduction

A survey is often the best method to collect data from which may be obtained information and feedback on a specific topic asking questions of individuals and then generalizing the results to the group represented by the respondents. The questionnaire can be also the base of a periodical evaluation of the employees of a survey company. In literature (Tourangeau *et al.*, 2000; Kenneth *et al.*, 2002, McDonald and Adam, 2003; de Leeuw, 2005; Couper, 2005) there are presented different modes of data collection: ACASI (computer assisted self administered interviews), ASAQ (audio self administered questionnaire), CAPI (computer assisted personal interviewing), CASI (computer assisted self interviewing), CATI (computer assisted telephone interviewing), DBM (disk by mail), PAPI (paper and pencil personal interviewing), PDE (prepared data entry/web surveys), SAQ (self administered questionnaires), TDE (touchtone data entry) or VRE (voice recognition entry). These modes of data collection differ in respect to the method of contacting the respondents and questionnaire administration. In one group of methods, the questionnaires are delivered by an interviewer, in another one the questionnaires are administered without approach.

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When a questionnaire is administered by an interviewer, there might be differences in asking questions and recording answers. Many researchers (Hansen, 2007; Dillmana *et al.*, 2009; Davis *et al.*, 2010; Haunberger, 2010; Dykema *et al.*, 2012) have shown that those differences may be caused, among other factors, by socio-demographic, physical or personality characteristics of an interviewer. Thus, Schuman and Converse (1971), Singer *et al.* (1983), Webster (1996), Ford, Norris (1997), Davis, Silver (2003), Olson, Bilgen (2011), Liu and Stainback (2013), Blaydes and Gillum (2013) have shown that socio-demographic characteristics of an interviewer like gender, race, age, ethnicity, religion, educational level or experience may have a significant influence on the interpretation of questionnaire questions and on the formulation of respondents answers. According to Joseph (1982), Burger *et al.* (2001) and Murphy *et al.* (2010), physical characteristics of a survey interviewer like weight, height, facial expression or voice may determine the attractiveness and this affects the respondent perceived trustworthiness. This is possible because, in general, people are more inclined to comply with the requests of someone whom they like or see as similar to themselves. Personality characteristics of a survey interviewer are very important too. Hox and de Leeuw (2002), Abbott *et al.* (2003), Blohm *et al.* (2007), Durrant *et al.* (2010), Jäckle *et al.* (2013) have shown that characteristics like extroversion, adaptability, assertiveness, confidence or agreeability may affect the performance of a survey interviewer.

However, little is known about how to explain why some interviewers are more successful than others at persuading respondents to participate and about which skills or attitudes could be relevant at the recruitment and training of survey interviewers. Taking in consideration those aspects, the purpose of this paper is to create and validate a questionnaire that can be used for survey interviewer's selection. In order to do this, the first objective of this research work is to identify in literature those characteristics that define the dimensions of survey interviewer personality. The second objective is to validate the created questionnaire if it is verified on survey interviewers which are employees in a branch of a public opinion research institute. If the results obtained after data processing validate the dimensions of survey interviewer's personality then the questionnaire may be used in their selection process.

2. Research Methodology

Our research aims to achieve a questionnaire that can be used as a tool in survey interviewer's selection. For survey interviewer's selection we must know the dimensions of personality and the characteristics specific to a survey interviewer. In literature, to characterize the personality types there are used three approaches: the study of personality traits represented by the Big Five personality dimension (Digman, 1990); study of traits represented by the Big Six interest types (Holland, 1985); correlated study of the 2 approaches (Mount *et al.*, 2005). In our study, the choice of the dimensions of survey interviewer personality is based on the Big Five – factor structure of personality which describes the basic dimensions of normal personality (Goldberg, 1992). For each dimension there were associated characteristics specific to a survey interviewer (Table 2).

2.1 Population

The population observed is represented by employed survey interviewers in order to identify the needed characteristics for an efficient interviewer. To request the participation in our study notices were sent to each survey interviewer. We received affirmative responses from all 107 subjects working as survey interviewers. Table 1 presents information on these participants. This information was provided by the Human Resources Department of the Public Opinion Research Institute.

Table 1 | Socio-Demographical Characteristics of Respondents

Characteristics	(N)	Percentage (%)
Gender		
Male	12	11.2
Female	95	88.8
Age		
less than 20 years	7	6.5
20–24 years	67	62.6
25–30 years	30	28.0
over 30 years	3	2.8
Education level		
High school	27	25.2
University (ongoing)	48	44.9
University (licensed)	21	19.6
Postgraduate (ongoing)	2	1.2
Postgraduate (licensed)	9	8.4
Seniority		
less than 6 months	15	14.0
6 months–1 year	50	46.7
1–1.5 years	28	26.2
over 1.5 years	14	13.1

Source: Results obtained after data processing.

The information presented in Table 1 showed that 88.8% of respondents are female. The fact that in a company specialized in public opinion research survey female interviewers are more frequent than male interviewers is confirmed by the literature (Stoetzel and Girard, 1973).

Also, we observed that many of our respondents are young. More than half of them (62.6%) have between 20–24 years. This situation is also sustained in literature. Herzog and Willard (1988) showed that in different types of surveys, response rates are found to decline linearly with increasing age.

2.2 Questionnaire

Questionnaire administration was carried out in three steps. First, to our survey interviewers there were given survey instructions. For this purpose they received a questionnaire, pencil and paper and were assured that their answers would be treated anonymously and confidentially. Also, they were directed to a private office to complete their task. The second step was carried out by survey interviewers themselves. They were left alone to complete their questionnaires at their own speed. They were requested to inform us when they finished and to give us their written results. In a third step, the respondents were requested to review each of the questions and to indicate if they had found a particular question that is disturbing in any way. We proceeded in this way to determine how serious each respondent had been in expressing his opinion.

To achieve the questionnaire that was used to quantify survey interviewer's characteristics, we selected an appropriate set of questions to ask. This aspect is very important because, it is possible that the content of a questionnaire will be regarded by respondents as highly personal and this may lead to the manifestation of feelings of anxiety and reluctance to answer questions openly and honestly (Fillmore, 1999). To avoid this problem, we constructed suitable questions/items.

After items construction, for items selection we used different types of statistical analysis. Thus, descriptive analysis was used to study items distribution, principal components analysis (PCA) to identify the relationships between items, the content validity ratio (CVR) to test the content validity for each item, the content validity index (CVI) to analyse the overall content validity of the entire questionnaire and Cronbach Alpha Coefficient to evaluate the reliability.

Taking the example of the Big Five personality test, personality characteristics of a survey interviewer can be clustered in five dimensions: conscientiousness, extraversion, agreeableness, emotional stability and openness. These dimensions were associated with a set of characteristics presented in Table 2.

Table 2 | Dimensions and Characteristics of a Survey Interviewer

Dimension	Characteristics
Conscientiousness	– disciplined, efficient, planned, rigorous, responsible
Extraversion	– active, assertiveness, dynamic, open, sociable
Agreeableness	– compassionate, cooperative, friendly, generous, helpful
Emotional stability	– control, calm, self-confidence, stress, tolerant
Openness	– adventure, creativity, curiosity, experience, independence

Source: Processed after Gosling *et al.* (2003)

The dimensions recorded through responses given by respondents at questions were included in a questionnaire. Each characteristics from Table 2 was expressed through

an item or a statement. Considering the characteristics established in order to define the dimensions of survey interviewer personality, the items were extracted from the International Personality Item Pool (<http://ipip.ori.org/>) (Goldberg *et al.*, 2006) (Table 3).

Table 3 | List with Defined Items/Statements

Personality dimension	Characteristics	Item/Statement	
Conscientiousness	disciplined efficient rigorous planned responsible	Item 1 Item 2 Item 3 Item 4 Item 5	I prefer to put things back in their proper place. I pay attention to details. I like to do things rigorously. In my work I always follow a schedule. I do my duties with responsibility.
Extraversion	active assertiveness dynamic open sociable	Item 6 Item 7 Item 8 Item 9 Item 10	I like to be active. I have an assertive personality. I'm full of energy. I'm open around people. I am sociable around strangers.
Agreeableness	cooperative friendly generous compassionate helpful	Item 11 Item 12 Item 13 Item 14 Item 15	I like to cooperate with others. I sympathize with others' feelings. I take time out for others. I feel others' emotions. I'm helpful and unselfish with others.
Emotional stability	control calm self-confidence stress tolerant	Item 16 Item 17 Item 18 Item 19 Item 20	I'm not easily upset. I remain calm in tense situations. I am determined and with spirit of initiative. I handle stress well. I'm tolerant with others.
Openness	adventure creativity curiosity experience independent	Item 21 Item 22 Item 23 Item 24 Item 25	I like to do something really adventurous. I'm original and often I have excellent ideas. I'm curious about many different things. I have many experiences at work. I like to be independent.

Source: International Personality Item Pool (<http://ipip.ori.org/>)

Considering the types of items/statements and the possible responses, a first problem to solve was that of defining the scales for the measurement of each characteristics. In literature (Michell, 1986; Jaba, 2002) the principal types of scale used to quantify a phenomenon are: nominal scale, ordinal scale, interval scale, ratio scale, intensity scale and opinion scale. For our items/statements a scale that reflects the frequency with which a certain characteristics of personality occurs must be chosen (Brown, 2010). Regarding this aspect, Preston and Colman (2000) and Lee and Peak (2014) argued that, the most valid and discriminating scale is that with six or more points. Therefore, for items presented in Table 3 we used the ordinal scale coded from 1 to 6 (1- NEVER, 2- RARELY, 3-SOMETIMES, 4-OFTEN, 5- VERY OFTEN, 6- ALWAYS). Thus, the new questionnaire has 25 features and questions regarding socio-demographical characteristics like: gender

(1- Male, 2- Female), age (1-less than 20 years, 2- 20–24 years, 3- 25–30 years, 4- more than 30 years), educational level (1- High school, 2- University (ongoing), 3- University (licensed), 4- Postgraduate (ongoing), 5- Postgraduate (licensed)) and seniority (1- less than 6 months, 2- 6 months–1 year, 3- 1–1.5 years, 4- 1.5–2 years, 5- more than 2 years).

An important aspect for the fulfillment of our research objectives was to test the normal distribution of responses for each statement. This approach helped us to identify the consistencies in the respondents' answers. The next step was to describe the relations between items. To achieve this, we could use a multivariate statistical analysis method like principal component analysis (PCA) (Michell, 1997; Härdle and Simar, 2003; Johnson and Wichern, 2007). The relationships between considered items (X_j) and components (C_k) can be written as a classical regression equation as follows:

$$C_k = b_1X_1 + b_2X_2 + \dots + b_jX_j + \dots + b_pX_p \quad (1)$$

Coefficients b_j are coefficients associated to initial items X_j and show the connection between different items and the latent variables C_k . We note that the variables used in PCA reflect only the correlations between items. According to Kline (1993) to a common factor of a group of items there does not correspond necessarily to a characteristics of respondents. Using descriptive analysis and principal component analysis (PCA) there can be analysed items collinearity. However, the removal of some items should not be made before checking the validity and reliability (Cortina, 1993).

In literature (Haynes *et al*, 1995; Goodwin, 2009; Waltz *et al.*, 2010) can be identified several types of validity: predictive validity, concurrent validity, content validity and construct validity. In this study, we test the content validity using a quantitative measure called content validity ratio (CVR) (Lawshe, 1975). CVR offers information about item level validity and can be calculate as

$$CVR = \frac{n_e - N / 2}{N / 2} \quad (2)$$

where n_e is the number of respondents which considered the item to be “ALWAYS” and N is the total number of respondents. Lawshe (1975) argues that the utility of the CVR can be derived from the following characteristics:

- When fewer than half say “ALWAYS”, the CVR is negative;
- When half say “ALWAYS” and half do not, the CVR is 0;
- When all say “ALWAYS”, the CVR is computed to be 1.00;
- When the number saying “ALWAYS” is more than half, but less than all, the CVR is between 0 and 0.99.

In other words, CVR can take values between -1 and 1 . The closer to 1 the CVR is, the more essential the item is considered to be. Conversely, the closer to -1 the CVR is, the more non-essential it is. To compute the mean for each item, the following conversion was done for the values reflected in the questionnaire: ALWAYS or VERY OFTEN – was replaced by 2 ; OFTEN or SOMETIMES – was replaced by 1 ; RARELY or NEVER – was replaced by 0 . Only those components and links with CVR values and meeting the minimum values were retained in the final model.

To select items of final questionnaire, the following criteria were applied:

- accept if CVR is equal to or larger than 0.75;
- accept if CVR is between 0 and 0.75 and the mean of items/statements is higher than 1.5.

A mean value higher than 1.5 may indicate that, the mean of items is closer to the value “ALWAYS or OFTEN” than to the value “RARELY or NEVER”. A CVR value of 0 indicates that the respondents are undecided and that not less than fifty per cent of the respondents believed that the item is “ALWAYS or OFTEN”;

- reject if CVR is less than 0 and the mean is smaller than 1.5. This means that it will be impossible to include any item that was not judged to be essential by at least half of the respondents, or any item possessing a mean of judgments that is closer to “RARELY or NEVER” than to “ALWAYS or OFTEN” (Allahyarri *et al.*, 2011).

After items/statements have been identified for inclusion in the final form, according for the whole questionnaire was computed the content validity index (CVI). According Lawshe (1975), CVI is the mean of the CVR values of the retained items and can be calculated as:

$$CVI = \frac{\sum_n^1 CVR}{total\ number\ of\ accepted\ items} \quad (3)$$

The overall content validity will be higher if the value of the CVI is closer to 0.99 and vice versa.

Reliability/internal consistency of a questionnaire can be evaluated using Cronbach Alpha coefficient. In literature (Cronbach, 1951; Crano and Brewer, 1973; Mendoza *et al.*, 2000; Osburn, 2000) Cronbach Alpha coefficient is defined as follows:

$$\alpha = \frac{p}{p-1} \left[1 - \frac{\sum_{i=1}^p \sigma_i^2}{\sigma_T^2} \right] \quad (4)$$

where p is the number of items (p must be 2 or higher), σ_i^2 is the variance of the i th item, $i = 1, 2, \dots, p$ and σ_T^2 is the sum of the item variances and co-variances:

$$\sigma_T^2 = \sum_{i=1}^p \sigma_i^2 + \sum_{i \neq j} \sigma_{ij}.$$

In general, Cronbach alpha coefficient can take values between 0.5 and 0.9. Thus, if $\alpha \geq 0.9$ the internal consistency is excellent, if $0.8 \leq \alpha < 0.9$ the internal consistency is good, if $0.7 \leq \alpha < 0.8$ the internal consistency is acceptable, if $0.6 \leq \alpha < 0.7$ the internal consistency is questionable, if $0.5 \leq \alpha < 0.6$ the internal consistency is poor and if $\alpha < 0.5$ the internal consistency is unacceptable.

Data analysis was made in R statistical software.

3. Results

3.1 Descriptive statistics analysis

With the data obtained after questionnaire administration we created a database using statistical software R. After the organization, processing and verification of the database we tested the normal distribution of responses for each item/statement. Because the considered items are measured using ordinal scale there were obtained the frequencies of each type of response (Table 4).

Table 4 | Descriptive Statistics Analysis

Item/ Statement	Frequency						
	NEVER (1)	RARELY (2)	SOMETIMES (3)	OFTEN (4)	VERYOFTEN (5)	ALWAYS (6)	Total
Item 1	–	3	2	2	7	93	107
Item 2	–	3	4	3	7	90	107
Item 3	1	1	2	3	13	87	107
Item 4	13	16	–	–	1	77	107
Item 5	1	2	4	3	5	92	107
Item 6	13	14	–	–	–	80	107
Item 7	9	18	2	3	2	73	107
Item 8	–	–	2	2	7	96	107
Item 9	–	1	1	5	8	92	107
Item 10	17	15	1	2	3	69	107
Item 11	1	3	7	5	5	86	107
Item 12	1	–	1	1	5	99	107
Item 13	–	–	2	6	10	89	107
Item 14	–	1	1	5	7	93	107
Item 15	–	–	1	1	7	98	107
Item 16	14	19	5	1	1	67	107
Item 17	–	2	3	2	10	90	107
Item 18	–	–	1	5	19	82	107
Item 19	–	1	3	4	10	89	107
Item 20	–	–	3	3	20	81	107
Item 21	–	1	1	1	8	96	107
Item 22	–	–	1	3	20	83	107
Item 23	–	1	6	5	15	81	107
Item 24	–	–	2	2	10	93	107
Item 25	–	2	2	5	20	78	107

Source: Our own calculations.

From the results obtained in Table 4, we observe that more than 70% of respondents assign for frequency categories “VERY OFTEN” and “ALWAYS”, which highlights specific characteristics for a specific dimension.

3.2 Identifying the association between characteristics and personality dimensions

In order to study the relationships between characteristics and personality dimensions we applied principal component analysis (PCA). After data processing, we obtained a p-value < 0.05 associated to χ^2 (value of 5,064.43) and a value of 0.871 for Kaiser-Meyer-Olkin Measure (KMO). Those results show that between characteristics and personality dimensions there are significant statistical connections and our solution is very good. Also, largest eigenvalue (12.185) corresponds to the first dimension which explains 48.742% of total variance of defining characteristics of the personality dimensions. The first 3 dimensions explain 74.738% of total inertia (Table 5). This result shows that, the first 3 dimensions are most important in explaining the personality of a survey interviewer.

Table 5 | Extracted Variances

Eigenvalues	Dim 1	Dim 2	Dim 3	Dim 4	Dim 5
Variance	12.185	4.303	2.196	1.178	1.046
% of variance	48.742	17.214	8.783	4.710	4.184
Cumulative % of variance	48.742	65.955	74.738	79.448	83.632

Source: Our own calculations.

In Table A1 from Appendix A there are presented details regarding the value of each item/statement for the first 3 dimensions (Dim 1, Dim 2, Dim 3) and contribution to their construction (cos2). Analysing the results from Table A1, Appendix A, we observe that the first dimension (Dim 1) is associated with the following items: Item 1, Item 2, Item 3, Item 5, Item 8, Item 12, Item 17, Item 18, Item 19, Item 21, Item 22, Item 23, Item 24 and Item 25. The second factorial axis (Dim 2) is represented by items like: Item 6, Item 7, Item 10, Item 14 and Item 16. The third dimension (Dim 3) is represented by items: Item 4, Item 9, Item 11, Item 13 and Item 20. This result is confirmed by correlations between items and dimensions (Figure 1).

From Figure 1 we observe that there are three groups of items between which different statistical connections exist. Thus, one group is represented by a set of 5 items (Item 4, Item9, Item11, Item13 and Item20), a second group is represented by a set of 14 items (Item 1, Item 2, Item 3, Item 5, Item 8, Item 12, Item 17, Item 18, Item19, Item 21, Item 22, Item 23, Item 24 and Item 25), a third group is represented by a set of 6 items (Item 6, Item7, Item 10, Item 14, Item 16). Also, we can observe that are positive and negative correlations between those groups. An explanation of this result is that, there

is a concordance of the way in which the respondents answered at our statements. In this case, we must read carefully each statement to see which is the common aspect defining the group. Also, it can happen that in a dimension which brings together items of similar meaning to appear and items that relates to a different reality, but between which is a very close correlation. This is the case of items 4, 6, 7, 10 and 16 (see also weak correlations obtained from PCA between items in Table A2 from Appendix A). On the other hand, it must be considered the fact that the grouping of items by PCA should not be taken to be absolute, but indicative.

Figure 1 | Variables Factor Map PCA

Source: Our own calculations.

3.3 Questionnaire validity and internal consistence

To check the questionnaire validity, we calculated the CVR values and mean values for all 25 items (Table 6). Taking in consideration the criteria presented before in the paper, were rejected those items for which CVR value is smaller than 0.5.

From the results presented in Table 6, we observe that the rejected items are: Item4, Item6, Item7, Item10 and Item16. After the elimination of 5 items, a new questionnaire with 20 items was developed. For this questionnaire was calculated the CVI value.

The CVI for the final questionnaire is $CVI = \frac{17.39}{20} = 0.8695$.

The internal consistency of the questionnaire which was build was evaluated using the alpha Cronbach coefficient. For the final questionnaire the alpha Cronbach coefficient is $\alpha = 0.958$. This result shows us that $\alpha \geq 0.9$ and we may conclude that the internal consistency is excellent.

Table 6 | CVR and Means Values of all Items and Acceptance or Rejection Results

Item/Statement	CVR	Mean	Accept/Reject
Item 1	0.87	1.90	Accept
Item 2	0.81	1.87	Accept
Item 3	0.87	1.91	Accept
Item 4	0.46	1.47	Reject
Item 5	0.81	1.87	Accept
Item 6	0.49	1.49	Reject
Item 7	0.40	1.44	Reject
Item 8	0.93	1.83	Accept
Item 9	0.87	1.92	Accept
Item 10	0.34	1.37	Reject
Item 11	0.70	1.81	Accept
Item 12	0.94	1.96	Accept
Item 13	0.85	1.92	Accept
Item 14	0.87	1.93	Accept
Item 15	0.96	1.98	Accept
Item 16	0.27	1.33	Reject
Item 17	0.87	1.92	Accept
Item 18	0.89	1.94	Accept
Item 19	0.85	1.91	Accept
Item 20	0.89	1.94	Accept
Item 21	0.94	1.96	Accept
Item 22	0.92	1.96	Accept
Item 23	0.79	1.88	Accept
Item 24	0.93	1.96	Accept
Item 25	0.83	1.90	Accept

Source: Our own calculations

4. Conclusion

The present study was designed to develop a specific questionnaire for the selection of survey interviewers and personnel evaluation. For this, a first objective was to identify those characteristics that define the dimensions of survey interviewer personality. A second objective was to validate the created questionnaire if it is verified on a sample of survey interviewers which are employee in a branch of private company specialized in public opinion research.

In the present study, one of the important content validity approaches was conducted and the results showed that the final questionnaire was a valid and reliable instrument that could be used in measurement and predicting survey interviewer's characteristics.

Those characteristics are used to create a profile of a survey interviewer. Given the personnel requirements planning and job description, this profile can be used to establish the strategies and methods of recruiting candidates for the position of survey interviewer.

Likewise, the final questionnaire allows not only finding the right people but also the entrance in the company of people with great chances to achieve performance.

However, future research should attempt to evaluate construct validity of this version. On the other hand, whereas the final questionnaire can be used to the identification of survey interviewer's characteristics, future research is needed to examine which characteristics actually predict his behaviour.

Appendix

Table A1 | Value of Each Item at the First 3 Dimensions (Dim 1, Dim 2, Dim 3) and Contribution to Their Construction (cos2)

Item	Dim 1	ctr	cos2	Dim 2	ctr	cos2	Dim 3	ctr	cos2
1.	0.964	7.624	0.929	0.147	0.502	0.022	-0.035	0.057	0.001
2.	0.934	7.162	0.873	0.048	0.054	0.002	0.046	0.094	0.002
3.	0.955	7.492	0.913	0.140	0.457	0.020	-0.026	0.032	0.001
4.	0.531	2.310	0.281	-0.531	6.543	0.282	0.454	9.398	0.206
5.	0.955	7.485	0.912	0.058	0.078	0.003	0.066	0.197	0.004
6.	-0.260	0.553	0.067	0.812	15.331	0.660	0.391	6.970	0.153
7.	-0.280	0.642	0.078	0.848	16.729	0.720	0.388	6.869	0.151
8.	0.911	6.809	0.830	-0.002	0.000	0.000	0.125	0.709	0.016
9.	0.039	0.012	0.002	-0.473	5.202	0.224	0.683	21.260	0.467
10.	-0.294	0.709	0.086	0.846	16.627	0.716	0.352	5.647	0.124
11.	0.111	0.102	0.012	-0.549	6.992	0.301	0.603	16.557	0.364
12.	0.821	5.532	0.674	0.193	0.868	0.037	-0.073	0.242	0.005
13.	-0.010	0.001	0.000	-0.500	5.799	0.250	0.676	20.838	0.458
14.	-0.121	0.121	0.015	0.438	4.461	0.192	0.268	3.281	0.072
15.	-0.062	0.032	0.004	0.201	0.934	0.040	0.108	0.527	0.012
16.	-0.301	0.743	0.091	0.783	14.251	0.613	0.263	3.151	0.069
17.	0.955	7.492	0.913	0.140	0.457	0.020	-0.026	0.032	0.001
18.	0.897	6.602	0.804	0.125	0.364	0.016	-0.033	0.049	0.001
19.	0.932	7.133	0.869	0.096	0.214	0.009	0.009	0.004	0.000
20.	-0.033	0.009	0.001	-0.252	1.478	0.064	-0.104	0.489	0.011
21.	0.821	5.532	0.674	0.193	0.868	0.037	-0.073	0.242	0.005
22.	0.871	6.221	0.758	0.180	0.753	0.032	-0.081	0.298	0.007
23.	0.862	6.095	0.743	-0.079	0.146	0.006	0.243	2.684	0.059
24.	0.871	6.221	0.758	0.180	0.753	0.032	-0.081	0.298	0.007
25.	0.947	7.366	0.898	0.078	0.140	0.006	0.041	0.077	0.002

Source: Our own calculations.

Table A2 | Correlation Matrix

Correlation	Item1	Item2	Item3	Item4	Item5	Item6	Item7	Item8	Item9	Item10	Item11	Item12	Item13	Item14	Item15	Item16	Item17	Item18	Item19	Item20	Item21	Item22	Item23	Item24	Item25
Item1	1.000	.888	.969	.418	.913	-.145	-.158	.877	-.068	-.171	.007	.812	-.071	-.063	-.034	-.183	.969	.914	.898	-.061	.812	.870	.758	.870	.897
Item2	.888	1.000	.860	.482	.972	-.184	-.202	.900	.060	-.218	.114	.725	-.090	-.080	-.044	-.234	.860	.810	.867	-.077	.725	.774	.852	.774	.917
Item3	.969	.860	1.000	.418	.884	-.144	-.158	.875	-.068	-.171	.018	.787	-.071	-.063	-.034	-.183	1.000	.900	.915	-.061	.787	.825	.773	.825	.927
Item4	.418	.482	.418	1.000	.506	-.346	-.379	.543	.457	-.409	.659	.269	.477	-.150	-.082	-.438	.418	.409	.457	.409	.269	.331	.576	.331	.480
Item5	.913	.972	.884	.506	1.000	-.175	-.191	.926	.068	-.207	.125	.744	-.086	-.076	-.042	-.221	.884	.833	.891	-.073	.744	.795	.878	.795	.943
Item6	-.145	-.184	-.144	-.346	-.175	1.000	.970	-.188	-.158	.875	-.228	-.093	-.165	.434	.238	.725	-.144	-.142	-.158	-.142	-.093	-.114	-.199	-.114	-.166
Item7	-.158	-.202	-.158	-.379	-.191	.970	1.000	-.206	-.173	.958	-.250	-.102	-.181	.421	.231	.805	-.158	-.155	-.173	-.155	-.102	-.125	-.218	-.125	-.182
Item8	.877	.900	.875	.543	.926	-.188	-.206	1.000	.086	-.222	.175	.563	-.024	-.082	-.045	-.238	.875	.858	.899	-.079	.563	.694	.903	.694	.905
Item9	-.068	.060	-.068	.457	.068	-.158	-.173	.086	1.000	-.187	.464	-.043	.727	-.069	-.038	-.200	-.068	-.066	-.074	-.066	-.043	-.054	.248	-.054	.006
Item10	-.171	-.218	-.171	-.409	-.207	.875	.958	-.222	-.187	1.000	-.269	-.110	.195	.380	.208	.884	-.171	-.167	-.187	-.167	-.110	-.135	-.235	-.135	-.196
Item11	.007	.114	.018	.659	.125	-.228	-.250	.175	.464	-.269	1.000	-.063	.560	-.099	-.054	-.289	.018	-.010	.084	.075	-.063	-.077	.253	-.077	.106
Item12	.812	.725	.787	.269	.744	-.093	-.102	.563	-.043	-.110	-.063	1.000	-.045	-.040	-.022	-.118	.787	.656	.732	-.039	1.000	.811	.622	.811	.731
Item13	-.071	-.090	-.071	.477	-.086	-.165	-.181	-.204	.727	-.195	.560	-.045	1.000	-.072	-.039	-.209	-.071	-.069	-.077	-.069	-.045	-.056	.103	-.056	-.081
Item14	-.063	-.080	-.063	-.150	-.076	.434	.421	-.082	-.069	.380	-.099	-.040	-.072	1.000	-.035	.366	-.063	-.061	-.069	-.061	-.040	-.050	-.087	-.050	-.072
Item15	-.034	-.044	-.034	-.082	-.042	.238	.231	-.045	-.038	.208	-.054	-.022	-.039	-.035	1.000	.049	-.034	-.034	-.038	-.034	-.022	-.027	-.047	-.027	-.039
Item16	-.183	-.234	-.183	-.438	-.221	.725	.805	-.238	-.200	.884	-.289	-.118	-.209	.366	.049	1.000	-.183	-.179	-.200	-.179	-.118	-.145	-.252	-.145	-.210
Item17	.969	.860	1.000	.418	.884	-.144	-.158	.875	-.068	-.171	.018	-.787	-.071	-.063	-.034	-.183	1.000	.900	.915	-.061	.787	.825	.773	.825	.927
Item18	.914	.810	.900	.409	.833	-.142	-.155	.858	-.066	-.167	-.010	.656	-.069	-.061	-.034	-.179	.900	1.000	.853	-.059	.656	.809	.719	.809	.833
Item19	.898	.867	.915	.457	.891	-.158	-.173	.899	-.074	-.187	.084	.732	-.077	-.069	-.038	-.200	.915	.853	1.000	-.066	.732	.743	.845	.743	.929
Item20	-.061	-.077	-.061	.409	-.073	-.142	-.155	-.079	-.066	-.167	.075	-.039	-.069	-.061	-.034	-.179	-.061	-.059	-.066	1.000	-.039	-.048	-.084	-.048	-.070
Item21	.812	.725	.787	.269	.744	-.093	-.102	.563	-.043	-.110	-.063	1.000	-.045	-.040	-.022	-.118	.787	.656	.732	-.039	1.000	.811	.622	.811	.731
Item22	.870	.774	.825	.331	.795	-.144	-.125	.694	-.054	-.135	-.077	.811	-.056	-.050	-.027	-.145	.825	.809	.743	-.048	.811	1.000	.628	1.000	.765
Item23	.758	.852	.773	.576	.878	-.199	-.218	.903	.248	-.235	.253	.622	.103	-.087	-.047	-.252	.773	.719	.845	-.084	.622	.628	1.000	.628	.855
Item24	.870	.774	.825	.331	.795	-.144	-.125	.694	-.054	-.135	-.077	.811	-.056	-.050	-.027	-.145	.825	.809	.743	-.048	.811	1.000	.628	1.000	.765
Item25	.897	.917	.927	.480	.943	-.166	-.182	.905	.006	-.196	.106	.731	-.081	-.072	-.039	-.210	.927	.833	.929	-.070	.731	.765	.855	.765	1.000

Source: Our own calculations.

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