FACTOR ANALYSIS OF THE PERSONALITY DIMENSIONS OF SALES ASSOCIATES IN THE FINANCE AND INSURANCE SECTOR¹

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Abstract

The aim of the present study is to ascertain the factors of a sample containing 1000 people from the finance and insurance sector via the shortened version of the California Psychological Inventory probing the respective personality dimensions. The additional objectives include the comparison of previously identified results and factors obtained on a standardised Hungarian sample. In light of the above, I forward the following hypothesis H1): The number and content of the factors explored by the S-CPI (principal component analysis) on the present sample significantly differs from that of the number and content of factors identified and arrived at during the 1985 standardisation process, mainly due to the impact of the following dimensions: Sociability, Social presence, Dominance, and Self-Control. The practical application of the respective research results indicates a difference between the personality of the average Hungarian citizen and that of the average sales associates in the given sectors.

Keywords: sales people, personality, factor analysis

1. Introduction

Can any difference be discerned between the personalities of a Hungarian sales associate in the finance and insurance sector and that of the average Hungarian citizen and what is the extent of the given discrepancy? In order to answer this question the present study relies on an internationally well-known and popular questionnaire originally developed in the United States, the Shortened California Psychological Inventory (S-CPI). The reason for basing this study on a psychology or personality questionnaire is that "using personality inventories poses no major hazard, and the information provided could be the most useful and valuable components of aptitude testing if the respective requirements are adhered to." (Juhász, 2019a, p. 73).

Since no similar survey to the California Psychological Questionnaire has been conducted on a sample of domestic or foreign salespeople, some of the research results exploring salespeople's competencies are presented below. Goleman "writes about salespeople and explains how many high-performance salespeople display the genuine ability to listen to others (a sort of aimless presence), and thereby they can fully tune into the feelings of others. Star managers in the business world do not approach clients with the intention of selling something to them by all means, but act as a sort of

¹ The study is part of a doctoral thesis to be defended in the Doctoral School of Enterprise Theory and Practice of Miskolc University in June 2019.

consultant whose most important task is to first listen to and understand the needs of their clients, and then adapt their proposals to those needs." (Goleman, 2007 in Juhász, 2019b, p. 174).

Durugy, Kollár and Madarász (2016) write: the salesperson should be polite, patient, a good judge of character, helpful, tactful and have good interpersonal skills. The article entitled 'What Makes a Successful Salesperson?', in answering this question, draws attention to the following personality traits: enthusiasm, enjoying dealing with people, vitality and sincerity, (Plotkin, 1987). According to Ingram and LaForge (1992), the top five personality factors must be particularly pronounced in the personality repertoire of a successful salesperson, namely empathy, verbal communication skills, ego drive, ego strength and enthusiasm. According to several consulting firms, successful salespeople must have the following personality traits: ability to make decisions, reliability, independence, goal-drivenness, firmness of character, accuracy and highly developed intellect (Mitev, 2008). According to *Dankó* (2009), in the United States, two basic characteristics were found that salespeople must have by all means, one is the ambition to seal the deals and the other is empathy. Further researches in the USA have established the importance for salespeople to have the following characteristics: planning and organisational skills, ability to adapt to clients with different personality and behaviour, flexibility, initiative and personal energy, desire for recognition.

In line with the research findings cited above, the present study the aim of the present study is to ascertain the factors of a sample containing 1000 people from the finance and insurance sector via the shortened version of the California Psychological Inventory probing the respective personality dimensions. The additional objectives include the comparison of previously identified results and factors obtained on a standardised Hungarian sample. In light of the above, I forward the following hypothesis H1): The number and content of the factors explored by the S-CPI (principal component analysis) on the present sample significantly differs from that of the number and content of factors identified and arrived at during the 1985 standardisation process mainly due to the impact of the following dimensions: Sociability, Social presence, Dominance, and Self-Control.

The practical application of the respective research results revealed differences between the personality features of an average Hungarian citizen and an average sales associate participating in the research project (see cf. Juhász, 2019b). Furthermore, the research identified specific personality factors displaying significant discrepancy. The respective findings can be of great help for HR and enterprise managers in selecting sales associates for the finance and insurance sector.

2. Introducing the applied tool of inquiry, the shortened version of the California Psychological Inventory and the previous findings

Harrison Gough introduced a personality scale considered the forerunner of the California Psychological Inventory in 1948. In 1951 a test containing 15 scales was released in order to measure the most important dimensions of a normal personality to be expanded to 18 scales later and eventually the Inventory came to contain 21 scales.

The test in its present form was first published in 1957 and it has gained widespread popularity since then. In the United States alone as much as 250,000 CPI questionnaires are completed annually. In Hungary it was introduced in 1973 at the Department of General Psychology of ELTE primarily for research purposes (Oláh, 1985a, p. 9). The 21 scales are grouped in the following way (Oláh, 1985a, p. 17; Oláh, 1985b, pp. 11-12), The titles of the scales are followed with the English language abbreviation of the given terms (Table 1).

Juhász, I. Factor analysis of the personality dimensions of sales associates in the finance and insurance sector

| I: The first scale | II: The second scale | III: The third scale | IV: The fourth scale | | |
|-----------------------|--------------------------|--------------------------|-----------------------------|--|--|
| group | group | group | group | | |
| Indicators of | The indicators of | Indicators of the | Indications of interest | | |
| interpersonal | socialization, social | intrinsic and extrinsic | orientation, the plasticity | | |
| effectiveness, social | maturity, sense of | motivational base behind | of personality, and the | | |
| adroitness, internal | responsibility, internal | individual performance | features of the intellect. | | |
| balance and self- | balance and personal | and intellectual | | | |
| confidence. | value systems. | efficiency. | | | |
| 1. Dominance | 8. Responsibility | 15. Achievement | 18. Psychological- | | |
| (Do) | (Re) | via Conformance | Mindedness (Py) | | |
| 2. Capacity for | 9. Socialization | (Ac) | 19. Empathy (Em) | | |
| Status (Cs) | (So) | 16. Achievement | 20. Flexibility (Fx) | | |
| 3. Sociability (Sy) | 10. Self-Control | via Independence | 21. Femininity (Fe) | | |
| 4. Social Presence | (Sc) | (Ai) | | | |
| (Sp) | 11. Tolerance (To) | 17. Intellectual | | | |
| 5. Self-Acceptance | 12. Ego Strength | Efficiency (Ie) | | | |
| (Sa) | (Es) | | | | |
| 6. Sense of Well- | 13. Good | | | | |
| Being (Wb) | Impression (Gi) | | | | |
| 7. Anxiety (An) | 14. Communality | | | | |
| | (Cm). | | | | |

 Table 1. The 4 scale groups of California Psychological Inventory (own editing)

In the United States the factor structure of the CPI has been explored with a variety of factor analytical methods since the 1960s. The factor analysis of the CPI test performed on a Hungarian sample (Oláh, 1985c, pp. 96-99) shows the following dimensional arrangement (Table 2).

Factor I identifies the Stability-Emotionality dimension in the Hungarian sample. Its leading scale item is Self-control while the other scales allocate the persons under inquiry along the adaptability-neurosis continuum.

Factor II can be used for diagnosing Extroversion and Introversion. Its "strongest" scale is Sociability and the relevant four subscales facilitating the identification of interpersonal adequacy and efficiency are: Dominance, Self-acceptance, Capacity for Status, and Social Presence.

| Factor I. | Factor II. | Factor III. | Factor IV. | |
|-------------------|---------------------|-----------------|--------------------|--|
| 1. Self-Control | 9. Sociability | 14. Femininity | 16. Flexibility | |
| 2. Good | 10. Dominance | 15. Communality | 17. Achievement | |
| Impression | 11. Self-Acceptance | | via Independence | |
| 3. Sense of Well- | 12. Capacity for | | 18. Psychological- | |
| Being | Status | | Mindedness | |
| 4. Tolerance | 13. Social Presence | | | |
| 5. Achievement | | | | |
| via Conformance | | | | |
| 6. Responsibility | | | | |
| 7. Socialization | | | | |
| 8. Intellectual | | | | |
| Efficiency | | | | |

Table 2. The factor analysis of the CPI test performed on a Hungarian sample (own editing)

Factor III helps in ascertaining the extent of Conventionalness and includes the scales Communality and Femininity implying the respect of general social expectations and the insistence on conventional sex-based roles respectively.

Factor IV is labeled as Independence and Originality with Flexibility being its leading scale while the additional two scales confirm Independence and Sensitivity as the most important requirements for creativity (Oláh, 1985b, p. 39).

The factor analysis related to the S-CPI performed on Hungarian sample shows some discrepancy concerning the abovementioned arrangement (Oláh, 1985a, pp. 72-73). The names of indicators are followed by the respective factor weight (Table 3).

| Factor I. | Factor II. | Factor III. | Factor IV. | |
|---------------------|--------------------------------|--------------------|--------------------|--|
| 1. Self-Control | 1. Self-Control 8. Sociability | | 18. Achievement | |
| (0,91) | (0,71) | (0,86) | via Independence | |
| 2. Ego Strength | 9. Dominance | 15. Socialization | (0,74) | |
| (0,88) | (0,70) | (0,72) | 19. Flexibility | |
| 3. Sense of Well- | 10. Self-Acceptance | 16. Responsibility | (0,72) | |
| Being (0,86) | (0,65) | (0,52) | 20. Psychological- | |
| 4. Tolerance (0,80) | 11. Capacity for | 17. Femininity | Mindedness (0,64) | |
| 5. Good | Status (0,63) | (0,49) | 21. Empathy (0,58) | |
| Impression (0,78) | 12. Social Presence | | | |
| 6. Achievement | (0,60) | | | |
| via Conformance | 13. Intellectual | | | |
| (0,76) | Efficiency (0,57) | | | |
| 7. Anxiety (-0,71) | | | | |

Table 3. The factor analysis related to the S-CPI performed on Hungarian sample (own editing)

As far as the S-CPI is concerned Factor I also pertains to the Stability-Emotionality dimension in Hungary. The validity of Ego strength and Anxiety as new scale items is indicated by their identical placement with the Self-Acceptance and Tolerance factors. Thus, the respective factors actually display the efficiency of tension management and the extent of frustration tolerance.

The "strongest" scale of Factor II is Sociability with the following five scale items suitable for the determination of interpersonal adequacy and effectiveness: Dominance, Self-acceptance, Capacity for Status, Social presence and Intellectual efficiency. Consequently, this factor, even in case of the S-CPI can be used for ascertaining the Extroversion-Introversion dimensions.

Factor III evaluates the attitudes pertaining to the adherence or rejection of conventions or rules in a more unequivocal manner than its counterpart in the longer version. Communality implies abiding by or fulfilling general social expectations, Socialization and Responsibility measure the efficiency of conscience functions, and the Femininity scale indicates how the given person relates to conventional sex roles. It is highly likely that this factor describes the Super-ego efficiency in the S-CPI.

Factor IV can be described with the Independence-Originality label whose leading scale indicates Autonomy and Originality coupled with Performance via independence while the other scales represent conceptual and behavioural flexibility, emotional sensitivity and openness, in other words the most important requirements of creativity. (Oláh, 1985a, p. 73).

3. Research methodology: the subjects of the inquiry, measurement, data collection, analysis²

3.1. The subjects of the inquiry

The inquiry focused on the personal features of financial sales associates working in banks, insurance companies, residential savings, financial consultancy firms, factor and leasing firms, savings banks, and stock brokerages.

3.2. Measurement, assessment and data collection

The inquiry called on the participants to complete an on-line questionnaire containing closed and openended questions The on-line questionnaire contained the following segments:

- 1. Basic information, personal data.
- 2. Shortened version of the California Psychological Inventory (S-CPI).

In order to avoid potential spatial and temporal limitations associated with paper based questionnaires I opted for the on-line version. I also wanted to make sure that the questionnaire could be easily completed by the use of the mouse. Most questions could be answered via a simple click or selection from a scroll down menu.

Due to the personal nature of some of the questions the respective answers or scores were treated as highly confidential information. Upon request the respondents could receive personalized feedback and evaluation. The respective results were integrated into excel charts and diagrams. Said tables and diagrams along with an 18 page document in word format explaining the particular scores were sent via e-mail to the respondents.

The most important features of the data collection process:

- The questionnaire was constructed, developed, tested, adjusted, and finalized in November and December 2016.
- The questionnaire was made available on-line on 14 December, 2016 at 11.14 and was closed on 20 July, 2017 at 08.13.
- Instead of random sampling I followed the snowball principle as actual sample members recruited future participants for the sampling process. The final sample was based on social capital formed by former and present colleagues, associates, students, my relatives, friends, and acquaintances. Following the snowball format, respondents completing the questionnaire received the respective link one more time and were asked to forward the questionnaire to their own circle of friends and acquaintances. In addition to individual respondents I contacted several organisations and businesses in the finance and sales sector both directly and indirectly. The respective institutions included the Hungarian Banking Association, the National Association of Financial Enterprises, the Hungarian Leasing Association, the Chamber of Commerce and Industry of Hungary, and the Hungarian Economic Association.
- While initially 1656 people attempted to complete the questionnaire it was fully completed by 1069 respondents.

² While the exploration conditions and the methodology of the doctoral research facilitating the writing of the present study are identical to that of other publications related to doctoral research, respective additional components tend to vary.

- The finalized sample included 1000 respondents (the responses given by 69 respondents had to be disregarded due to several causes including irrelevant employment experience or national economic sector).
- 584 respondents requested and received written feedback via e-mail.
- The sample included respondents from 19 counties of Hungary, along with the capital, Budapest.

3.3. Analysis

The collected data was analyzed and evaluated by the SPSS program, the average and the deviation of the sample was established from various aspects along with the use of frequency and distribution ratios. As far as statistical tests are concerned I relied on factor analysis.

4. Factor analysis concerning the personality traits of sales associates in the finance sector via the shortened version of the California Psychology Inventory

Having quantified the research question I forward the following hypothesis and the relevant examination method: H1): The number and content of the factors explored by the S-CPI (principal component analysis) on the present sample significantly differs from that of the number and content of factors identified and arrived at during the 1985 standardisation process mainly due to the impact of the following dimensions: Sociability, Social presence, Dominance, and Self-Control.

My Hypothesis was tested by factor analysis utilising the results of the correlational matrix, the antiimage matrix, the Kaiser-Meyer-Olkin criterion, the Bartlett test, and the Scree test.

In light of the factor analysis of CPI results related to a Hungarian sample performed by Attila Oláh I decided to perform a factor analysis of the S-CPI questionnaire scores of financial sales associates. The principal component analysis was supposed to reveal whether the number and content of the factors differ from that of the factors obtained via standardization.

The purpose of factor analysis on the one hand is the exploration of the given structure and the reduction of the respective data. (Sajtos et al., 2007, p. 250). Furthermore "the mathematical model of factor analysis can characterise a data collection with numerous variables as a linear combination of several factors" (Ketskeméty et al., 2005, p. 182). I have opted for the principal component analysis within the field of factor analysis which is the best approach if our objective is the achievement of the potentially highest explanation variance fraction with least possible factors. (Sajtos et al., 2007, p. 250).

Before launching the factor analysis it must be ascertained whether the given data is suitable for that purpose. For the realization of such objective one can deploy several methods and I relied on the SPSS program to calculate the Correlation matrix, the Anti-image matrix, the Kaiser-Meyer-Olkin criterion, the Bartlett probe, and the Scree test. All five methods confirmed the suitability of the given data for factor analysis.

Due to length-based restrictions I will only show the results gained by the last three methods instead of providing a detailed discussion of the findings arrived at by applying the first two methods. The results gained by the respective approach are the following:

- 1. Based on the results of the correlation matrix— "in which it is desirable that as many correlations show a value over 0,3 as possible" (Sajtos et al., 2007, p. 248), it can be concluded that a desirable condition of multicollinearity is applicable as 142 values out of the possible 210 correlational values, that is, 68% are above 0,3 and 202 values (96,2%) are significant.
- 2. The table (Table 4) compiled as a result of the application of the anti-image matrix method can be divided into two segments. The upper part shows "such components of the anti-image

covariance matrix which are outside of the diagonal and are independent from the other variables, thus these values should be low. The actual rule of thumb allows only 25% of the components outside the main diagonal be higher than 0,09" (Sajtos et al., 2007, pp. 255-256). Presently, the number of such components is one. In the lower section the components of the diagonal within the anti-image correlation matrix are of primary importance as they contain the measure of sampling adequacy values pertaining to the given variable. If the MSA value of a variable is below 0,5, it should be excluded from the analysis (Sajtos et al., 2007, pp. 256-257). The current MSA values are between 0,607 and 0,977.

- 3. Kaiser-Meyer-Olkin indicator. The Kaiser-Meyer-Olkin indicator is one of the most important benchmark measurements preceding the factor analysis. Consequently, it must be noted that "there are sets of variables which can be considered suitable or non-suitable for the analysis. The given suitability can be established with the KMO indicator" (Székelyi et al., 2008, p. 66). "The KMO value is the average of the MSA values related to the anti-image correlation matrix. The appropriateness of the indicator is shown by the following formula: if the KMO \geq 0,9, then it is optimal for the given purpose" (Sajtos et al., 2007, p. 258). Table 4 also including the results of the Bartlett test, shows that the value of the given KMO indicator is 0,931, thus the respective indicators are outstanding for factor analysis.
- 4. Bartlett-test The Bartlett test explores whether the variables in the basic multitude are uncorrelated (null hypothesis), that is, it tests whether the correlation matrix components outside the main diagonal differ only incidentally from zero. The table indicates that "the null hypothesis of the Bartlett test (there is no correlation among the starting variables) can be discarded since the significance level (Sig.) is lower than 0,05, in other words, the starting variables according to the Bartlett test are suitable for factor analysis due to the existing correlation" (Sajtos et al., 2007, pp. 257-258).
- 5. The Scree Plot (Figure 1.) helps in determining the number of factor dimensions. Our findings suggest that the application of four or perhaps five factors would be reasonable.



Figure 1. Scree plot figure for determining the factor dimensions

| KMO and Bartlett's Test | | | | | |
|-------------------------|------|--------------------|-----------|--|--|
| Kaiser-Mey Adequacy. | ,931 | | | | |
| Bartlett's | Test | Approx. Chi-Square | 16887,705 | | |
| Sphericity | 1030 | df | 210 | | |
| | | Sig. | ,000 | | |

 Table 4. Results of the Kasier-Meyer-Olkin criterion and the Bartlett Test (own editing)

The above calculations reinforce the need for factor analysis. The primary results are often hard to interpret as "there is a likelihood of such variables correlating with the given factor, which have nothing to do with each other, thus making interpretation impossible. This problem can be solved by rotation" (Sajtos et al., 2007, p. 264). Out of the possible rotation methods I selected the most frequently deployed Varimax, which "maximalises the variance explained by factors along with distributing them in a more proportionate manner" (Sajtos et al., 2007, p. 267). Table 5 below shows the results obtained by the principal component method.

Table 5. The total explained variance following the rotation of the factors calculated according to the results of the S-CPI questionnaire (own editing)

| Total Variance Explained | | | | | | | | | |
|--|---------------------|----------|----------------------------|----------|--------------------------|------------|-------|----------|------------|
| ıt | Initial Eigenvalues | | Extraction Sums of Squared | | Rotation Sums of Squared | | | | |
| ner | | | | Loadings | | Loadings | | | |
| odi | Total | % of | Cumulative | Total | % of | Cumulative | Total | % of | Cumulative |
| uo | | Variance | % | | Variance | % | | Variance | % |
| D | | | | | | | | | |
| 1 | 9,649 | 45,949 | 45,949 | 9,649 | 45,949 | 45,949 | 6,675 | 31,784 | 31,784 |
| 2 | 2,831 | 13,482 | 59,431 | 2,831 | 13,482 | 59,431 | 5,406 | 25,743 | 57,527 |
| 3 | 1,762 | 8,390 | 67,821 | 1,762 | 8,390 | 67,821 | 2,162 | 10,294 | 67,821 |
| 4 | ,928 | 4,418 | 72,240 | | | | | | |
| 5 | ,725 | 3,453 | 75,693 | | | | | | |
| 6 | ,639 | 3,044 | 78,737 | | | | | | |
| 7 | ,567 | 2,700 | 81,437 | | | | | | |
| 8 | ,537 | 2,556 | 83,992 | | | | | | |
| 9 | ,421 | 2,006 | 85,999 | | | | | | |
| 10 | ,365 | 1,738 | 87,737 | | | | | | |
| 11 | ,359 | 1,712 | 89,448 | | | | | | |
| 12 | ,338 | 1,609 | 91,058 | | | | | | |
| 13 | ,312 | 1,486 | 92,544 | | | | | | |
| 14 | ,283 | 1,347 | 93,891 | | | | | | |
| 15 | ,273 | 1,301 | 95,192 | | | | | | |
| 16 | ,255 | 1,212 | 96,404 | | | | | | |
| 17 | ,209 | ,997 | 97,401 | | | | | | |
| 18 | ,204 | ,971 | 98,371 | | | | | | |
| 19 | ,156 | ,743 | 99,114 | | | | | | |
| 20 | ,112 | ,534 | 99,648 | | | | | | |
| 21 | ,074 | ,352 | 100,000 | | | | | | |
| Extraction Method: Principal Component Analysis. | | | | | | | | | |

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Each component illustrates or explains the variance of the variables in the sequence of their own values. The first factor indicates the largest section, according to the given table data 45,96% before rotation and 31,78% after rotation, and after that the remaining factors contribute to the aggregate variance in a decreasing order. According to the Kaiser criterion only those factors should be taken into consideration whose own value is at least 1. The data in the last column of the table ("Cumulative %") indicates that he three factors received as a result of the application of the Kaiser criterion explain 67,82% of the variance. The application of the three factors is not fully justified by the previously presented Scree Plot describing the own values of factors in their respective order where the "y" axis represents the own value of the factors and the "x" axis displays the number of the given factors. Accordingly, the fourth and rather the fifth new factor can "flatten" the figure as the respective steepness does not change significantly. As the elbow rule states the number of factors displaying close values as compared to each other should be maximalized until the steepness of the curve suddenly changes and it becomes linear (Sajtos et al., 2007, pp. 259-276). While presently such change could be discerned with the fourth factor, that one does not meet the requirements of the Kaiser criterion thus I insisted on using three factors. The respective results of the table suggest that Factors I, II, and III explain 31,78%, 25,74% and 10,29% of the variance respectively.

Based upon the results of the rotated factor weight matrix (Table 6) it must be concluded that Factors I and II were constructed via the rotation of the results of 9 dimensions and Factor III was produced by the rotation of 3 dimensions respectively. The requirement for considering the given variables significant from a practical aspect includes a factor weight at or above 0,5. All 21 dimensions reach said value and most even exceed it. The statistical significance of the factor weights depends on the number of the sample components. The smaller the sample the larger factor weight should a variable have, thus in case of a sample of 50, the factor weight should reach at least 0,75, while in case of a sample with 350 or more components the factor weight should be at least 0,30 (Sajtos et al., 2007, p. 268). The factor weight of the presently analyzed sample of 1000 participants can be considered statistically significant. Having compared the received results with the previously obtained factor analysis data I named the factors in the following manner:

- 1. The components of Factor I and their names: The factor contains the following components: Sociability, Social Presence, Dominance, Self acceptance, Anxiety, Capacity for Status, Ego Strength, Empathy, Intellectual Efficiency. Since in this factor the strongest scale is Sociability (0,844) and the rest can be used to ascertain interpersonal adequacy and efficiency (Social Presence, Dominance, Self-acceptance, Intellectual efficiency) I would name this factor the Extraversion-Introversion dimension as compared to Prof. Oláh's second factor named Stability-Emotionality. It is worth to note the inclusion of the only dimension with negative factor weight, Anxiety (-0,804) in this factor along with the Ego Strength and Empathy dimensions. Since these latter dimensions cannot be disregarded either I recommend the Stable Extroversion:-Stable Introversion denomination.
- 2. The components of Factor II and their names: The factor contains the following components: Self control, Socialization, Responsibility, Good Impression, Achievement via Conformance, Sense of Well-Being, Communality, Tolerance, Femininity, the scale with the strongest or highest value is Self-control at 0,834. Having compared the results with Oláh's published data the given factor appears to fully meet the requirements of Oláh's Superego efficiency factor listed as no. III. Furthermore, with the exception of two dimensions Ego strength and Anxiety, said factor also appears to be equivalent with Oláh's Stability-Emotionality factor listed as No. I. After adding the relevant factor weights in light of the factor-related data of the previous research Factor I registered

at the value of 3,442 and Factor III at 2,758. Consequently I agree with the Stability-Emotionality factor denomination, but I also believe that the term Effective Stability-Effective Emotionality would be more appropriate.

3. The components of Factor III and their names: Said factor is composed of the following dimensions: Flexibility, Achievement via Independence, Psychological-Mindedness, with the highest value registered by Flexibility at 0,790. All three components with the exception of Empathy can be found in Oláh's four-part Factor IV named Independence-Originality. Consequently, I rely on Oláh's terminology as it indicates autonomy, originality, flexible thinking and conduct, and openness, in other words, the most important features of a creative person. (Oláh, 1985a, p. 73).

 Table 6. The rotated factorweight matrix following the rotation of factors calculated from the S-CPI scores (own editing)

| Rotated factorweight matrix | | | | | | |
|--|------------|-----------|------------|--|--|--|
| Dimonsions | Components | | | | | |
| Dimensions | Factor I | Factor II | Factor III | | | |
| q28 Sociability (Sy) | ,844 | ,198 | -,104 | | | |
| q29 Social Presence (Sp) | ,842 | -,008 | ,217 | | | |
| q26 Dominance (Do) | ,842 | ,042 | -,084 | | | |
| q30 Self-Acceptance (Sa) | ,806 | ,065 | -,011 | | | |
| q32 Anxiety (An) | -,804 | -,338 | -,135 | | | |
| q27 Capacity for Status (Cs) | ,780 | ,121 | ,314 | | | |
| q37 Ego Strength (Es) | ,701 | ,535 | ,212 | | | |
| q44 Empathy (Em) | ,634 | ,415 | ,182 | | | |
| q42 Intellectual Efficiency (Ie) | ,624 | ,482 | ,258 | | | |
| q35 Self-Control (Sc) | ,055 | ,834 | ,312 | | | |
| q34 Socialization (So) | ,112 | ,803 | -,123 | | | |
| q33 Responsibility (Re) | ,200 | ,741 | -,003 | | | |
| q38 Good Impression (Gi) | ,170 | ,705 | ,234 | | | |
| q40 Achievement via Conformance (Ac) | ,528 | ,677 | ,019 | | | |
| q31 Sense of Well-Being (Wb) | ,565 | ,624 | ,237 | | | |
| q39 Communality (Cm) | ,419 | ,619 | -,116 | | | |
| q36 Tolerance (To) | ,434 | ,602 | ,472 | | | |
| q46 Femininity (Fe) | -,278 | ,595 | -,226 | | | |
| q45 Flexibility (Fx) | -,173 | -,271 | ,790 | | | |
| q41 Achievement via Independence (Ai) | ,161 | ,360 | ,644 | | | |
| q43 Psychological-Mindedness (Py) | ,420 | ,075 | ,534 | | | |
| Extraction Method: Principal Component Analysis. | | | | | | |
| Rotation Method: Varimax with Kaiser Normalization. ^a | | | | | | |
| a. Rotation converged in 4 iterations. | | | | | | |

Having performed the factor analysis (principal component analysis) on the S-CPI scores I propose: the factor analysis (principal component analysis) of the samples of financial sales associates resulted in the construction of the following factors:

- 1. Factor I: Stable Extroversion-Stable Introversion,
- 2. Factor II: Effective Stability–Effective Emotionality,
- 3. Factor III.: Independence Originality.

The number and the content of the factors significantly differs from the factor numbers and contents constructed via standardisation. The H1) hypothesis is accepted.

5. Conclusion

In conclusion, it can be said that the number and content of the factors explored by the S-CPI (principal component analysis) on the present sample significantly differs from that of the number and content of factors identified and arrived at during the 1985 standardisation process, mainly due to the impact of the following dimensions: Sociability, Social presence, Dominance, and Self-Control.

In light of the above results the selection of associates for the finance sector should prioritise such S-CPI dimensions with higher factor weight as Sociability, Social presence, Dominance, and Self-Control. The respective high scores should be treated as necessary yet not satisfactory conditions during the selection or hiring process.

"Furthermore, the research results along with the proposed tests can help in identifying areas and competences in need of development not only of potential candidates but of actual employees of the given firm....Consequently, the present research could be expanded to sales associates of other sectors of the national economy including FMCG, car sales, real estate sales, and the respective results could be a subject of a comparative analysis along with exploring the interchangeability of the given sectors" (Juhász, 2019c, 32-33).

References

- [1] Dankó, L. (2009). Személyes eladás a nappali és levelező tagozatos Marketing szakos MA közgazdász hallgatók számára. Miskolci Egyetem, Marketing Intézet, Pro Marketing Miskolc Egyesület, Miskolc.
- [2] Durugy, A., Kollár, P. & Madarász, I. (2016). Eladói kompetenciák mérése próbavásárlással. *Vezetéstudomány*, 47(2), 12-18. https://doi.org/10.14267/VEZTUD.2016.02.02
- [3] Goleman, D. (2007). Social Intelligence: The new science of human relationships. Libri Publishing House, Budapest.
- [4] Juhász, I. (2019a). Pályaalkalmassági vizsgálatok és alkalmazásuk az emberi erőforrások kiválasztásában különös tekintettel a személyiségtesztekre. *Munkaügyi Szemle*, 62(5), 65-74.
- [5] Juhász, I. (2019b). Pénzügyi területen dolgozó értékesítők személyiségvizsgálata. Pénzügyi Szemle, 64(2), 175-190. https://doi.org/10.15170/MM.2019.53.02.08
- [6] Juhász, I. (2019c). Psychological expectations of the business sphere regarding the hiring of financial sales associates with special attention to the financial and insurance sector of the national economy. Theses of Doctoral (PhD Dissertation), Doctoral School for Enterprise Theory and Practice, University of Miskolc, Miskolc.
- [7] Ingram, T. N. & LaForge, R. W. (1992). *Sales Management: Analysis and Decision Making*. The Dryden Press, Fort Worth.
- [8] Ketskeméty, L. & Izsó, L. (2005). *Bevezetés az SPSS programrendszerbe* Módszertani útmutató és feladatgyűjtemény statisztikai elemzésekhez. ELTE Eötvös Kiadó, Budapest.
- [9] Mitev, A. Z. (2008). Toborzás és kiválasztás. In Bauer, A. & Mitev, A. Z. (Eds.), *Eladásmenedzsment* (pp.151-166). Akadémia Kiadó, Budapest.
- [10] Oláh, A. (1985a). Pszichológiai tanácsadás a pályaválasztásban A California Psychological Inventory (CPI) rövidített változatának ismertetése. Módszertani Füzetek, 32. Országos Pedagógiai Intézet, Budapest.

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- [11] Oláh, A. (1985b). A Kaliforniai Pszichológiai Kérdőív (California Psychological Inventory -CPI) tesztkönyve. Munkalélektani Koordináló Tanács Módszertani Sorozata, Munkaügyi Kutatóintézet, Budapest.
- [12] Oláh, A. (1985c). A Kaliforniai Pszichológiai Kérdőív hazai alkalmazásával kapcsolatos tapasztalatok. In Hunyadi, Gy. (Eds.), *Pszichológiai Tanulmányok* (XVI., 53-101). Budapest.
- [13] Plotkin, H. M. (1987). What makes a Successful Salesperson? *Training and Development Journal*, September, 54-56.
- [14] Sajtos, L., Mitev, A. (2007). SPSS kutatási és adatelemzési kézikönyv. Alinea Kiadó, Budapest.
- [15] Székelyi, M., Barna, I. (2008). *Túlélőkészlet az SPSS-hez Többváltozós elemzési technikákról társadalomkutatók számára*. Typotex Elektronikus Kiadó Kft., Budapest.