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Employee Personality Characteristics vs. Job Satisfaction and Commitment: An Empirical Analysis

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Abstract:

Purpose: *The study aimed to identify the relationships between job satisfaction, engagement, and personality characteristics according to the five-factor personality model.*
Design/Methodology/Approach: *The empirical material was collected through a questionnaire survey. The survey was conducted in 2021 in the West Pomeranian province, Poland. 426 questionnaires were analyzed.*
Findings: *None of the personality characteristics considered influences either outcome in terms of job satisfaction or engagement, even though these categories are sometimes equated in the literature. Emotional stability is conducive to job satisfaction. Relatively higher engagement can be expected among extroverted and creative/open-to-change individuals.*
Practical Implications: *Organizations seeking to improve employee job satisfaction and engagement should assess personality traits during the recruitment process. Individuals already in the organization or newly hired can also be impacted in this regard through other HR procedures (e.g., training).*
Originality/Value: *Analysis of identified compounds in a Polish research sample.*

Keywords: *Work satisfaction, commitment, job involvement, work engagement, big five, personality characteristics.*

JEL codes: *M11, M54, O15.*

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1. Introduction

Job satisfaction and commitment have been the focus of research and practitioner interest for years (Godlewska-Werner *et al.,* 2020). This is because a number of benefits for organizations have been identified as a consequence of high levels of employee satisfaction and commitment (lower absenteeism, turnover, and high productivity) (Kinowska, 2025). It is worth emphasizing that there is considerable terminological confusion in the literature, which, on the one hand, hinders research, but on the other hand, enables the analysis of a wide range of relationships across diverse sets of constructs.

Research studies, therefore, seek correlates that determine these categories (though it is worth emphasizing that these relationships are usually not unidirectional). Numerous individual factors are also considered. One such variable may be employee personality characteristics. In this area, the five-factor model of personality (the so-called Big Five) is of interest to researchers. This work contributes to the trend of identifying links between individuals' characteristics and their job satisfaction or commitment in the context of the benefits the organization achieves.

The study aimed to identify the relationships among job satisfaction, commitment, and personality characteristics, in accordance with the five-factor personality model.

The paper is theoretical and empirical. The theoretical discussion organizes the conceptual framework within the research area. Methodological aspects of the research are then discussed. After presenting the results of empirical analyses conducted on a Polish sample of employees (n=426), the discussion identifies research limitations and outlines directions for future research.

2. Theory Background

Employee attitude and opinion studies often explore aspects of job satisfaction and commitment. These studies sometimes treat these categories as homogeneous. This approach is also present in the approaches of selected researchers.

Some scholars question the validity of distinguishing these two semantic categories, pointing to significant correlations between the two constructs (also confirmed by the research presented in the empirical section) and to similarities in the questions used in questionnaires examining both categories. Consequently, based on this view, Harter, Schmidt, and Hayes (2002), for example, created a synthetic construct that incorporates aspects of commitment and satisfaction.

However, the prevailing view in the literature is to treat these categories as empirically distinct constructs reflecting different aspects of work attachment

(Hallberg and Schaufeli, 2006). To this end, key criteria for differentiating them are sought.

Bakker, Albrecht, and Leiter (2011) argue that the main difference between satisfaction and commitment is the level of energy. While an commited and satisfied employee is contented, the former's energy level is significantly higher. Commitment unleashes energy within the employee, leading them to perform their job above and beyond the minimum requirements, and this is a discretionary process (Brajer, 2021). Therefore, job satisfaction surveys provide information about employees' assessment of selected aspects of their work. Commitment surveys, in turn, can provide insights into employee energy levels.

Taking this point of view into account, an employee can remain committed to work despite unfavorable working conditions that would otherwise be a source of dissatisfaction for him.

Classically, commitment is expressed through physical, cognitive, and emotional attitudes toward organizational roles, resulting from positive social exchanges in the workplace (Kahn, 1990). The cognitive dimension concerns employees' beliefs about the organization and its leaders. The emotional dimension reflects employees' positive (or negative) attitudes toward the organization and its leaders. The physical dimension, in turn, concerns the physical energy invested in fulfilling their professional responsibilities. A discommit employee dissociates themselves from the organization along these three dimensions.

An commited employee has a strong desire to be part of the organization, believes in its mission, goals, and values, and is willing to devote their energy to it (Juchnowicz, 2012; Brajer, 2021).

The research instrument used in empirical work to verify the level of respondents' commitment is closest to the above-presented understanding of this semantic category.

There is ongoing debate in the literature over whether commitment is a homogeneous or multidimensional construct. The first attempt to internally structure the construct was the three-component model by Meyer, Allen (1991), which identified three types of commitment:

- affective commitment – reflecting the employee's emotional bond with the organization,
- normative commitment – revealed by the employee's sense of obligation and loyalty to the organization,
- continuance commitment – manifested by the employee's willingness to remain in the organization.

Therefore, an employee may remain in the organization (for example, due to a lack of other alternatives) even though he or she does not feel a strong bond with it.

Commitment understood in this way is identified with organizational attachment. Other types of commitment are also distinguished (Vandenberghe, Bentein, and Stinglhamber, 2004; Kinowska, 2025):

- professional commitment - reflecting the level of identification of an individual with a profession,
- supervisor commitment – reflecting the level of employee identification with the supervisor,
- workgroup commitment – reflecting the employee's level of identification with the team.

Additionally, the literature on the subject identifies further categories with similar meanings. The first is job involvement. This category is semantically similar to employee participation in the company's affairs (Konrad, 2006). This category is also closest to job satisfaction, as it indicates the extent to which an individual experiences pleasant emotions at work (Brown, 1996).

In the literature, engagement is considered the antithesis of burnout (Maslach, Schaufeli, and Leiter, 2001; Rakowska and Mącik, 2016). This is referred to as work engagement (Saks, 2006). High levels of energy, passion, and complete focus on work characterize engagement in this approach. This construct encompasses three dimensions: dedication to work, work absorption, and vigor. This construct can be measured on the UWES scale (Schaufeli and Bakker, 2003).

The literature on the subject, therefore, contains numerous distinct constructs and measurement systems relating to commitment. While this allows for a more comprehensive understanding of the relationships analyzed within these categories, it also complicates the research process.

3. Methodology

The empirical material analyzed comes from a research project conducted in September-October 2021 (research timeframe) from respondents from the West Pomeranian Voivodeship (research spatial scope). The empirical data were collected from 426 respondents.

The study examined the relationships between two dependent variables - job satisfaction and commitment - and the characteristics of respondents' personality components, as defined by the five-factor model of personality (the so-called Big Five - independent variables).

Dependent variables were constructs derived from respondents' responses to four questions for the first dependent variable and six questions - for the second variable. The composite measure was the average of the respondents' individual choices. Respondents could rate the partial statements on a five-point Likert scale, where 1 indicated complete disagreement and 5 indicated complete agreement. To standardize the orientation of the partial measures for selected questionnaire questions, reverse-bias procedures were used.

Cronbach's alpha reliability coefficients were calculated for both constructs. They were 0.79 and 0.81 for job satisfaction and commitment, respectively, which are clearly above the cutoff values. This indicates high reliability for the scales considered.

Respondents also self-assessed their personality according to the five-factor model of personality (the so-called Big Five) (Fiske, 1949; Norman, 1963). Self-assessment was performed on a five-point Likert scale, with extreme values marked by opposing characteristics for each self-assessment area:

- extraversion (I am an extraverted - introverted person),
- agreeableness (I am an agreeable - quarrelsome person),
- conscientiousness (I am a conscientious - unconscientious person),
- neuroticism (I am a neurotic - emotionally stable person),
- openness to experience (I am a creative – conventional person).

The respondent could choose the following options:

- 1 - fully feature X,
- 2 - feature X dominates,
- 3 - the proportions of the intensity of both features are equal,
- 4 - feature Y dominates,
- 5 - fully Y feature.

Therefore, no procedures were carried out to assess the intensity of the above-mentioned features among respondents using specialized questionnaires, which should be considered a significant limitation on the predictive capabilities of the measurement tool.

Two multivariable econometric models were estimated for each dependent variable. Both models included the same set of independent variables. The econometric models were assessed for their goodness of fit to the model and actual data, taking into account the following diagnostic measures:

- multiple R^2,
- corrected R^2,

- F-test for ANOVA,
- standard error of estimation.

Appropriate estimates were performed using the Statistica package. In the correlation and regression analyses, three p-value thresholds were considered: $p<0.01$*, $p<0.05$**, $p<0.01$***.

Assumption diagnostics were conducted in regression analysis to identify research limitations. The main diagnostic findings are presented below:

- The intensity of independent variables was measured using a Likert scale. As a result, the variables formed were ordinal rather than continuous, and thus asymmetric distributions were typically observed. However, in the social sciences, such variables are also incorporated into econometric models.
- The problem outlined above did not arise for the dependent variables, as they formed a construct that was the average of responses to 4 (job satisfaction) or 6 (engagement) survey statements. The distribution of this variable was consistent with normality (p-value above the threshold for statistical significance in the KS test).
- The number of observations clearly exceeded the number of variables considered in the models.
- Heteroscedasticity was not identified, as evidenced by the irregular distribution of residuals and predicted values in Figures 1a and 1b.
- Figure 2 presents the normality plots of the residuals for both models considered. The data do not deviate significantly from the normality pattern.
- The Durbin-Watson test, applied only to model 2 (dependent variable: commitment), indicated no correlation among the random components (the statistic was close to 1).
- No strong correlation was observed between the independent variables. Statistically significant correlation measures were identified in the correlation matrix (Table 3), but their highest value was slightly above 0.3 (a weak relationship). This is also confirmed by the tolerance coefficient, which oscillates around 1, indicating a lack of correlation between the predictors.

4. Research Results

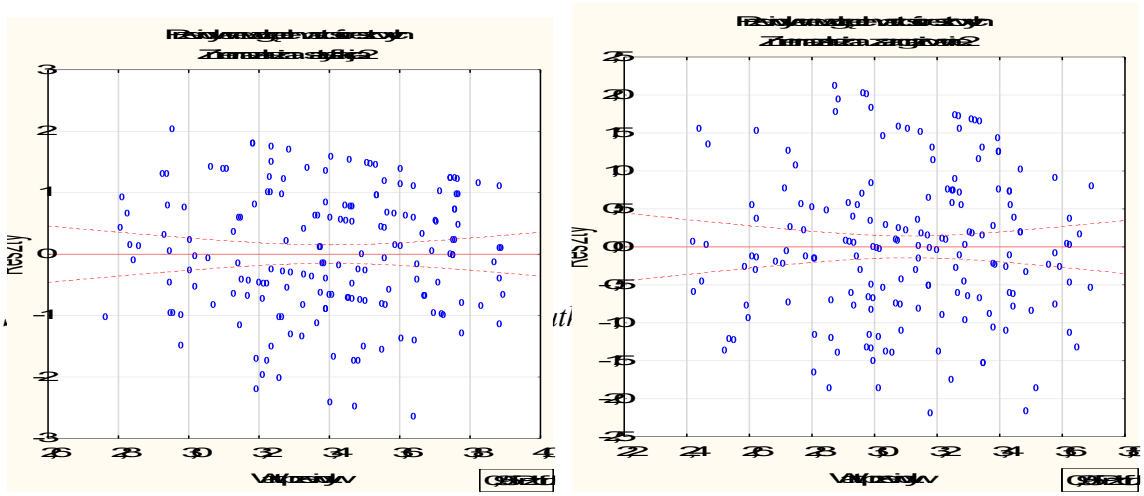
Table 1 presents the structure of respondents' self-reports regarding their personality self-assessment in selected areas according to the Big Five model. Table 2, in turn, presents selected statistical measures of the study sample, divided into dependent and independent variables.

In the area of extraversion, a similar proportion of the opposing options (extraversion, introversion) and the neutral option can be identified. A similar, relatively proportional distribution of selected options was also observed in the area

of agreeableness. Here, the kurtosis was closest to neutral (although options indicating an individual's agreeableness were most common, 45.5% of all choices).

Figure 1. *Scatterplots of residuals and predicted values*

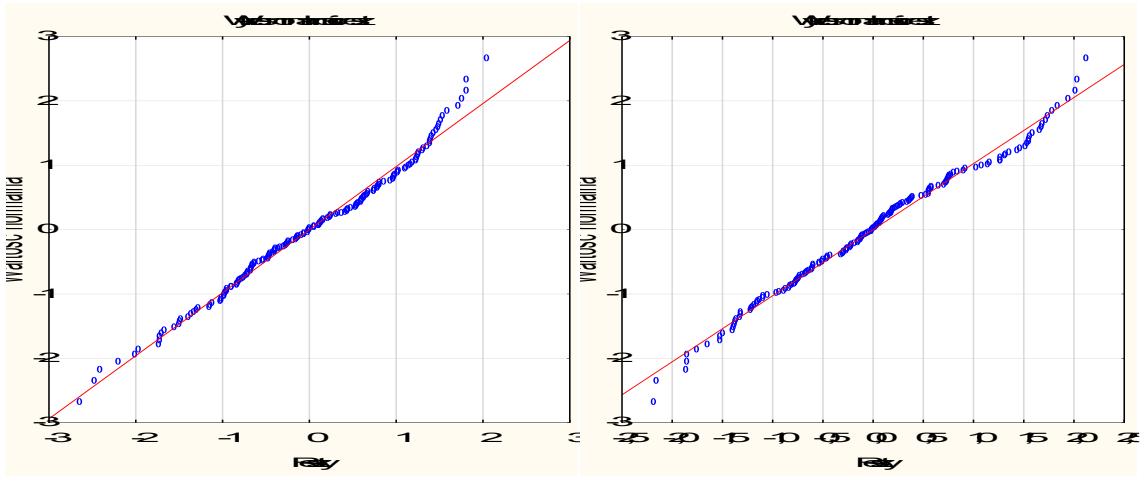
1a. model 1 1b. model 2



Source: *Own study.*

Figure 2. *Normality plots of residuals*

1a. model 1 1b. model 2



Source: *Author's own compilation based on author's own research.*

Table 1. *The structure of respondents' declarations regarding their self-assessment of their personality in selected areas*

field	trait X	1	2	3	4	5	trait Y
extroversion	ekstroverted	11,7	22,6	34,2	21,1	10,5	introverted
agreeableness	conciliatory	15,8	29,7	30,8	19,9	3,8	quarrelsome
conscientiousness	conscientious	26,8	42,6	19,6	6,8	4,2	unscrupulous
neuroticism	neurotic	5,3	12,8	25,6	28,2	28,2	emotionally stable
openness	creative	19,5	36,5	26,3	12,0	5,6	conventional

Source: *Author's own compilation based on author's own research.*

Table 2. *Selected measures of statistical description of dependent and independent variables*

variables	mean	standard deviation	coefficient of variation	skewness	kurtosis
dependent variables					
satisfaction	3,40	1,04	30,7	-0,23	-0,70
commitment	3,11	1,01	32,5	0,06	-0,66
independent variables					
extroversion	2,82	1,20	42,6	0,20	-0,75
agreeableness	2,68	1,11	41,4	0,12	-0,87
conscientiousness	2,15	1,08	50,1	1,02	0,81
neuroticism	3,69	1,19	32,2	-0,53	-0,70
openness	2,49	1,14	46,0	0,57	-0,39

Source: *Author's own compilation based on author's own research.*

Options indicating conscientiousness (lowest mean) and creativity were dominant in the third and fifth personality trait areas under consideration (lowest means). In these areas, a clear right-sided asymmetry of the distribution is revealed (highest positive kurtosis values).

In these areas, the highest coefficient of variation was also observed (oscillating around 50%). More than half of the respondents chose the neutral option in the last of the analyzed trait areas – neuroticism. Here, the highest mean level was clearly observed (significantly above 3), while the coefficient of variation was lowest. Negative kurtosis indicates a left-sided asymmetry in the data set.

The next table presents the correlation matrix of the dependent and independent variables, along with the tolerance coefficients for the independent variables.

Table 3. *Correlation matrix of dependent and independent variables*

variables	extroversion	agreeableness	conscien-tiousness	neuroticism	openness	satisfaction	tolerance
extroversion							0,895
agreeableness	0,025						0,886
conscientiousness	**0,204**	**0,286**					0,818

neuroticism	-0,088	**-0,184**	-0,043				0,958
openness	**0,287**	0,069	**0,311**	-0,024			0,851
satisfaction	-0,147	-0,034	-0,028	**0,220**	-0,110		x
commitment	**-0,209**	0,013	-0,035	0,126	**-0,233**	**0,759**	x

Source: *Author's own compilation based on author's own research.*

All correlation measure values indicate weak or no correlations, consistent with the interpretive framework. However, given the relatively large study sample, some correlations are statistically significant. Correlation measures range from –0.233 to 0.311. The highest correlations (positive) were identified for the following areas: conscientiousness (correlation coefficient 0.311) and extraversion (correlation coefficient 0.287) in relation to openness to change.

The results of previous analyses, as well as the assessment of tolerance measure values close to one, allow us to conclude that the variables included in the model are lowly correlated.

The relationship between the dependent variables - job satisfaction and commitment - where the correlation coefficient (0.759) indicates a strong relationship - was excluded from the analyses presented above.

The next two tables (4 and 5) present the estimation results of two multivariable models, each with the dependent variables: job satisfaction and commitment. Both models have the same set of independent variables.

Table 4. *Estimation results of model 1 (dependent variable: job satisfaction)*

variable	**b**	**SE (b)**	**beta**	**SE (beta)**	**t**	**p-value**
intercept	**3,10**	**0,41**			**7,47**	**0,000**
extroversion	-0,10	0,07	-0,11	0,08	-1,42	0,158
agreeableness	0,01	0,07	0,01	0,08	0,07	0,942
conscientiousness	0,03	0,08	0,03	0,08	0,34	0,737
neuroticism	**0,19**	**0,07**	**0,21**	**0,08**	**2,78**	**0,006**
openness	-0,07	0,07	-0,08	0,08	-1,02	0,312

Source: *Author's own compilation based on author's own research.*

Table 5. *Estimation results of model 1 (dependent variable: commitment)*

variable	**b**	**SE (b)**	**beta**	**SE (beta)**	**t**	**p-value**
intercept	**3,36**	**0,40**			**8,46**	**0,000**
extroversion	**-0,13**	**0,07**	**-0,15**	**0,08**	**-1,96**	**0,052**
agreeableness	0,03	0,07	0,04	0,08	0,48	0,635
conscientiousness	0,05	0,08	0,05	0,08	0,68	0,499
neuroticism	0,10	0,06	0,12	0,07	1,56	0,122
openness	**-0,18**	**0,07**	**-0,21**	**0,08**	**-2,60**	**0,010**

Source: *Author's own compilation based on author's own research.*

In the first model, a positive association between the neuroticism component and job satisfaction was identified. Therefore, emotional stability (one of the scale's extremes) is a significant determinant of job satisfaction. A one-unit shift on the neuroticism scale toward emotional stability is associated with a 0.19-unit increase in job satisfaction (and vice versa), while an increase between the scale's extremes (fully neurotic and fully emotionally stable) is associated with an almost one-unit increase in the synthetic measure of job satisfaction (exactly 0.76 units). The p-value is lower than the broadest threshold ($p < 0.01$). For the remaining personality components, no statistically significant relationships with the dependent variable were identified.

Interestingly, no statistically significant relationship was identified between neuroticism and the next dependent variable considered (model 2) - commitment (p-value = 0.112).

Statistically significant relationships were identified for extraversion and openness to change. It is worth emphasizing the narrower statistical significance for these variables at $p<0.1$ and $p<0.05$, respectively. For both of the previously indicated independent variables, negative relationships with the dependent variable were identified.

A one-unit shift on the extroversion scale toward introversion is associated with a 0.13-unit decrease in engagement. A corresponding change for the extreme values (fully extroverted versus fully introverted) is associated with a 0.52-unit change in the synthetic commitment measure.

For the next personality component – openness to change – statistically significant negative relationships with engagement were also identified. A one-unit shift on the appropriate scale (towards conventional personality) is associated with a 0.18-unit decrease in the synthetic measure of engagement. A shift between extreme values on the scale (towards conventional personality) is associated with a 0.72-unit decrease in the synthetic measure of engagement.

To sum up, an extroverted and creative personality promotes commitment. The next step of the analysis involved assessing the quality of fit for both estimated models. The relevant data are included in Table 6.

Table 6. *Fit quality measures for models 1 and 2*

measure	**model 1**	**model 2**
Multiple R^2	0,07	0,09
Corrected R^2	0,04	0,07
p-value for F(5,169)	0,028	0,005
standard error of estimation	1,02	0,97

Source: *Author's own compilation based on author's own research.*

In multivariate models, the adjusted R^2 should be considered. Unfortunately, the values of this diagnostic measure were relatively low. Model 2 achieved a slightly better fit. Analysis of variance (ANOVA), including the F statistic, confirmed the statistical significance of both multivariate models collectively. The standard error of the estimate did not significantly differentiate the individual models.

This error fluctuated around one for both models. Therefore, it is difficult to identify a qualitatively superior model based on this diagnostic measure.

5. Discussion

The research aimed to identify personality characteristics of individuals (in line with the Big Five model) that positively influence job satisfaction and commitment.

It is worth emphasizing that none of the characteristics considered influences either job satisfaction or commitment, even though these categories are sometimes equated in the literature. Furthermore, the study identified a strong relationship among the dependent variables in the models (correlation coefficient of 0.759 in Table 3).

The research presented in this paper indicates that an individual's emotional stability fosters job satisfaction. Relatively greater commitment can be expected among extroverted and creative individuals who are open to change.

Therefore, organizations that want to increase employee job satisfaction and engagement should, at the recruitment stage, verify their personality characteristics, seeking emotionally stable, extroverted, and creative individuals.

Individuals already in the organization or newly hired can also be influenced - for example, through training procedures (or other personnel procedures) - by fostering emotional stability or creativity, or by creating an environment that is friendly to introverted individuals.

It is worth emphasizing that modeling correlation/regression relationships allows for the description of interdependencies between the variables under consideration and the direction of dependencies, but does not allow for the unambiguous determination of a causal relationship. Therefore, dependent and independent variables can interact in two directions.

The following should be noted as limitations of the research presented in the work:

- the fact that analyses are conducted on the basis of data resulting from the subjective opinions of respondents completing the survey questionnaire,
- the fact that the spatial scope of the research was limited to the regional dimension (West Pomeranian Voivodeship) despite the reference to the Polish sample in the considerations,

- including ordinal variables (coded on the basis of data obtained within the Likert scale), burdened with asymmetry in econometric analyses,
- inability to identify causality (correlation and regression analysis),
- relatively low values of adjusted R^2 values for both models.

Indicating directions for future research, the work presents a static picture of reality, and the dynamics of change could be reflected in longitudinal studies. Future research could similarly encompass other individual variables differentiating the studied population.

In the commitment area, the focus was on a selected construct; however, it is worthwhile to broaden the scope of analysis to include other categories specified in the theoretical section (e.g., work engagement).

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