



Article Sustainable Careers: Reliability of Job Satisfaction Predictors for Employees Aged 50+. Evidence from Romanian Development Regions

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Abstract: In this paper, we analyze the determinants of job satisfaction for employees over the age 50 or more, using the latest SHARE-ERIC dataset (Wave 7) filtered for Romania (over 2000 records). After applying logistic regressions with average marginal effects, we obtained an overall and seven regional models which emphasize that a good atmosphere at the workplace and the deserved recognition received for the work done are the most reliable predictors of career satisfaction, confirmed in this order of importance by many other robustness checks. Particularly, in the case of respondents from the Western part of Romania, we found that meritocracy-based influence, namely deserved recognition, counts almost as much as the workplace atmosphere. For these individuals, previous educational performance and lifetime employment at a single job matter more than the previous dual-core on job satisfaction. Unexpectedly, the adults from central romania present a negative influence of life satisfaction on job satisfaction due to an unbalanced work-family vision of life. The locus of control has different effects on job satisfaction in south and south-western regions, while in the north-east, meaning in life is negatively influencing job satisfaction. Bridge employment exerts a negative influence on career satisfaction in the north-west, and in the South-East, and interpersonal trust has a positive effect.

Keywords: workplace atmosphere; job satisfaction; people aged 50 or more; own efforts recognition; logistic regression with marginal effects

1. Introduction

This research proposes to explore and analyze the determinants of Romanian job satisfaction with respect to it's seven development regions. We also intend to define these particular development regions by appealing to job satisfaction determinants, in order to better understand the introspective components that may or may not stimulate local organizational culture. Building job satisfaction may represent a desiderate for any organization seeking to be more efficient and effective, since it is clear that satisfied workers are more productive and more attached to their employer. Several scholars have pointed out that job satisfaction is an important determinant of institutional performance [1]. Others emphasize the important role that job satisfaction has in any employment-oriented development policy, as it is a central component of individual well-being [2]. Every employee has their own expectation, beliefs, values, and views, which makes more difficult the understanding of what makes peoples (dis)satisfied with their jobs. For instance, working condition, payments, or procedures implemented in these organizations can satisfy one employee in their work, but may dissatisfy another. Thus, job satisfaction is a complex phenomenon,



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Copyright: © 2021 by the authors. Licensee MDPI, Basel, Switzerland. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (https:// creativecommons.org/licenses/by/ 4.0/). and countless attempts have been made to define it [3]. The definition of job satisfaction could be summarized, as it follows: "a positive (or negative) evaluative judgment one makes about one's job or job situation" [4]. As such, improvements in job satisfaction are beneficial for both workers and organizations. From the humanitarian perspective, job satisfaction is associated with the physical and psychological well-being of workers, being considered an evaluation instrument for employees' good treatment within the organization. As such, job satisfaction can be seen as reliable construct which captures employees' perceptions related to workplace conditions. According to the totalitarian perspective, dissatisfied workers' behaviour can affect organizational functioning, productivity, and profitability [5]. Better organizational performance can be achieved when staffed by highly satisfied employees [6].

According to Judge [7], the factors that influence job satisfaction are either environmental factors or personal characteristics/traits. Davies et al. [8] and Bidewell et al. [9] maintain that there is direct relation between life satisfaction and job satisfaction. Other studies emphasize that employees are motivated by unfulfilled needs, which include esteem (achievement and recognition) [10], social needs (sense of belonging, appropriate support and protection) [11], self-actualization (the possibility to develop new skills and reach their fullest potential) [12], personality characteristics, and behaviors (Big Five personality traits, laziness, loneliness, reservation, person's connectedness with self) [13,14], job/work characteristics (organizational commitment, work atmosphere, experienced stress, recognition of good performance, retiring framework conditions, pay, and work type) [15–17]. Beside these factors, family well-being, education, number of previous jobs and residence were also found to influence attitudes about job satisfaction [18–20].

Other researchers view job satisfaction as a bi-dimensional construct formed by "intrinsic" and "extrinsic" satisfaction dimensions [21]. Intrinsic job satisfaction factors are centered on achievement, recognition, responsibility, advancement, growth, and work itself, while extrinsic factors are supervision, working conditions, co-workers, pay, policies and procedures, job security, status, and personal life [22]. Several other scholars focused on the motivational effects of distributive justice, based on comparisons between the inputs and outcomes of oneself versus those of comparison others [5]. Using equity theory to explain the concept of job satisfaction, Adams and Freeman [23] emphasized the fact that an individual becomes satisfied when there is a balance between inputs and outputs, when he is compared with others who are doing similar work. Based on the theoretical and empirical findings from the literature, several job determinants were chosen as predictors in the analysis as they were related to job satisfaction. Also, we include those indicators for which we had data availability for each of the regions included in the study.

Our study investigates the main determinants of job satisfaction among aged citizens, who actively participate in the labor market. We chose this category of individuals in concordance with the National Strategy for Employment 2014–2020 main objectives and actions directed towards increasing labor market participation of the elderly. This category of citizens remains one of the most affected by recent economic crises and restructuring. The Romanian employment rate for older workers of 46.3 per cent in 2018 is still situated below the EU-28 average. According to ILO [24], the increase in the employment of elder workers appears to be essential in diminishing the deficit of human and professional resources.

The novelties of this paper are two: first, most studies in the field analyze job satisfaction in the developed countries and are focused mostly on individual factors that improve job satisfaction. Our analysis explores job satisfaction in the context of a post-transition economy from the former communist bloc, a developing country which is struggling to attract and maintain its employees [25], in the context of labor shortages. Moreover, the analysis encases a large variety of indicators (self-esteem, social needs, self-actualization, working characteristics, and personality traits among others), and focused on a specific age category which is currently lacking from most Romanian studies. Second, we apply logistic regressions with average marginal effects, using the latest SHARE-ERIC dataset (Wave 7) filtered for Romania (over 2000 records). This approach is supported using a wellknown econometric model applicable to such a phenomenon, namely the binary logistic regression model, developed by Kwon and Remøy [26], in the context of a developing and post-transition economy from the former communist bloc. Using a SHARE-ERIC survey dataset (2017) for a Romanian sample of people aged 50 and over, we explore and analyze the common and the specific peculiarities of job satisfaction (motivation) in the case of individuals whose reside in one of Romania's seven development regions.

The paper is structured as follows: in the next section, we present the literature review on job satisfaction and, further, we formulate a series of hypotheses to be tested. In the following section, we detail the data and methods used in the research and then we present the main results. After these steps, we discuss them, and we present the most important conclusions.

2. Literature Review and Hypotheses Development

2.1. Job Satisfaction

Various approaches have been developed in the literature to analyze satisfaction. For instance, Taylor developed a scientifically designed incentive system, according to which money represents the primary factor that stimulates employees to higher performance, and, eventually, satisfaction [27]. Although Taylor's vision was simplified to one major denominator, it offered a starting point for the following debates on the main factors affecting satisfaction. For instance, the Hawthorne studies include, besides financial incentives, also social factors, like, interpersonal communication [5]. The present study [28] underlines the importance of specific psychological processes, known in the literature as expectancy theory.

Herzberg [29] developed the two-factor theory: motivators (intrinsic factors) and hygiene (extrinsic factors) and their relationships with employee's job satisfaction. Intrinsic job satisfaction factors are centered on achievement, recognition, responsibility, advancement, growth, and work itself [22]. This type of reward is a key predictor of productivity, efficiency, absenteeism, and turnover [30]. Nevertheless, the absence of these motivating factors does not necessary imply dissatisfaction, but, rather, their presence could be seen as a motivational force. Extrinsic job satisfaction factors or hygiene traits are supervision, working conditions, co-workers, pay, policies and procedures, job security, status, and personal life [22]. Although these factors did not serve as satisfiers, their absence could case dissatisfaction. Other approaches emphasize that both intrinsic and extrinsic rewards are contingent on the individual. Meaning, that one individual may consider intrinsic rewards important in detrimental to the others, based on their education, occupation, history, and demographics [30].

Assessing employees' job satisfaction is not an easy task. Employees constantly interacts with other co-workers, superiors, or subordinates. Moreover, employees must ensure compliance with laws and regulations, and follow policies and procedures applicable to their operations. It also requires that employees meet performance expectations or organizational goals and, at the same time, deal with the work conditions and the organizational environment, just to mention a few aspects of the workplace mediating work satisfaction assessment [31].

Based on the literature, the main causes that determine job satisfaction can be summarized in five categories: (1) personality characteristics and behaviour; (2) intrinsic and extrinsic values; (3) work situation; (4) life satisfaction; and (5) social influence [31–33]. Our study analyzes the main determinants of job satisfaction, taking into consideration predictors from each category, and focuses on a specific age category which is currently lacking from most Romanian studies.

2.2. Age and Job Satisfaction

Retirement is becoming a significant organizational issue, with an aged society leading to a substantial increase in the percentage of workforces nearing the transition to retirement [34]. According to ILO, worldwide the share of seniors (65+) and older persons (55+)

both in working-age populations and in the labor force has increased in the last decades, and it is estimated to increase in the coming years (ILO, 2018). This trend was accompanied by a steady decrease of youth (15 to 24 years old) in the working-age population and labor forces. The main reasons behind these results include reduction in fertility rates, shifts in life expectancy, and an overall tendency of aging populations. Aging society and a shortage in the young working-age population has led to serious concerns. Therefore, increasing workforce participation among older workers is imperative, and strategies to delay early retirement of experienced older workers have emerged as the most cost-effective ways to combat the shortage of working aged adults [35,36]. In Europe, in the past 25 years or so, many governments have imposed different retirement conditions to increase the active participation of the elderly in the labor-force and diminish early retiring plan. By tightening the conditions for early retirement, governments hoped to reduce the burden on the pension system. Moreover, the European Commission has drawn attention on the importance of people remaining in employment longer, and on the necessity of highlighting incentives suitable for postponing early retirement plans before the official retirement age is reached [37].

Consequently, it is important to identify the main determinants of job satisfaction for in older adults to develop proper strategies for delaying early retirement in experienced workers. Many scholars emphasize that age is a factor in job satisfaction or dissatisfaction, and older employees have the tendency to be more satisfied with their job than their younger peers. For instance, Lahoud [38] found that within network administrators there is a positive and linear relation between age and job satisfaction. Similar results were obtained by Bidewell et al. [9] who underlined that extrinsic job satisfaction is positively correlated with an increased age for retirement. Durst and DeSantis [39] also concluded that while, in the initial stages, job satisfaction decreases, the tendency is for it to increase with age, as older employee incline to experience more realistic expectations on their work/job than the younger workers.

2.3. Determining Factors for Job Satisfaction and Research Hypotheses

Different approaches have been evidenced in the literature, which reveal, as we previously mentioned, five categories of factors that determine job satisfaction: (1) personality characteristics and behaviour; (2) intrinsic and extrinsic values; (3) work situation; (4) life satisfaction; and (5) social influence [31–33].

The importance of personality traits/characteristics on job satisfaction has only recently received a special attention. However, the influence of personality facets on job satisfaction is quite unclear in the existing literature. For example, on the one hand, Furnham et al. [40] found no significant influence of personality on career satisfaction. On the other hand, other scholars emphasized that positive psychological capital is related to job satisfaction and performance [41]. Moreover, Steel et al. [14] discovered that the Big Five personality traits matter for job satisfaction. Besides the Big Five personality traits, proactive personality facets positively correlate with job satisfaction [42].

Other authors emphases the importance of "intrinsic" and "extrinsic" satisfaction dimensions [21]. Job satisfaction could be stimulated through received recognition for work done within an organization, in the form of job rewards [10]. Hofmans et al. [43] emphasized that the financial rewards only positively affect job satisfaction for a certain category of employees, while psychological rewards have the same influence but for all types of workers. A team climate is another partial predictor of job satisfaction [15], as a large part of the literature stressed. In this sense, a congenial and collaborative working atmosphere is considered to predict job satisfaction [44].

The relationship between the conviction that life is full of opportunities and work satisfaction is worth analyzing. Many scholars underlined a positive link between the opportunities for professional development [12] or promotion [45] and job satisfaction. The pursuit of meaning and purpose in life is a balancing element of the spiritual wellbeing [46]. Spiritual well-being is defined as the state of being connected to the inner self

and with the outside that may bring peace, harmony, and equilibrium [47]. Spirituality may stimulate well-being and work life [48] through an increased self-esteem, sense of belonging, and connectedness with organizational culture [49]. Therefore, Lee et al. [42] found that meaning in life was highly correlated with job satisfaction in the case of South Korean adults aged over 55 years.

One variable relating to job-stressor approaches, namely opinions about how often a person feels neglected, is here considered since the existing literature usually posits a negative relationship between a high level of experienced stress and job satisfaction [16]. Yuen et al. [17] found that this level of stress could be a perception of the workplace, or it could be generated through job's conditions and peculiarities (noisy environment, low privacy, ambiguity, or an overload of tasks etc.).

The relationship between retirement, job attachment, and career satisfaction are another consideration. Kosloski et al. [50] found that job satisfaction is an important variable that may influence the decision to retire. Moreover, it was demonstrated that individuals highly satisfied with their careers are less likely to prefer the standard retirement age, preferring to remain employed, if possible, while a lower job satisfaction predisposes to early retirement [8]. Bidewell et al. [9] emphasized that extrinsic job satisfaction was correlated with later increased retirement age [51], while Kalokerinos et al. [34] found that highly satisfied employees are more likely to prefer their employment status to phased retirement. The option to choose to engage in part-time or temporary paid work (bridge employment) after deciding to permanently retire from a career could influence job satisfaction [52]. In this direction, when taking into consideration bridge employment, Dendinger et al. [53] found that generative reasons for work are an important positive predictor of job satisfaction. The number of previous jobs held by an individual impacts job satisfaction; satisfaction decreases if graduate physiotherapists who changed jobs five or more time within the Australian health industry [54].

Other authors underline the influence of low job satisfaction on behaviours that might determine a higher rate of absenteeism, loneliness, laziness in work, and poor organizational performances [55]. Also, interpersonal trust is considered another potential predictor of job satisfaction, since it is one of the most important elements of social dyadic relationships and part of the organizational behavior that helps the individuals to engage efficiently in their personal and collective objectives. Matzler and Renzl [13] found that trust in peers and management highly influences workers' satisfaction and loyalty. Guinot et al. [56] stressed that interpersonal trust has a positive influence on job satisfaction, while Fargher et al. [57] confirmed this finding, both for Eastern and Western European male and female employees.

Many studies have confirmed a correlation between job satisfaction and life satisfaction [58]. Life satisfaction is a mental construct that evaluates well-being of life in general [59]. Several scholars have investigated this relationship and found it to be directly propor between life and job satisfaction [14,60,61].

Beside these factors, family well-being, education, and residence type were also found to influence attitudes of job satisfaction. The link between family well-being and job satisfaction is well-documented [18]. Several researches found a puzzling influence since a high degree of family welfare decreases job satisfaction in women, while for men this influence is inverted [62]. Education has a positive influence on job satisfaction and cultural environments because it creates opportunities for better jobs [18,63]. A large part of the existing literature emphasizes that rural and urban workers have different attitudes toward job satisfaction. Therefore, in a study analyzing the role of job location on self-esteem and job satisfaction, it was found that the urban-rural dichotomy matters for career satisfaction, especially where rural employees were more satisfied than urban ones with their payment and work routine [20].

Following the arguments mentioned above and available in the existing literature, we assume that:

Hypothesis 1 (H1). *The reward system (recognition of effort) and the atmosphere at the workplace are the strongest predictors of job satisfaction.*

Hypothesis 2 (H2). *Recognition matters more for job satisfaction in those development regions closer to Central and Western Europe.*

Hypothesis 3 (H3). *Life satisfaction and the financial well-being of the family positively influence job satisfaction.*

Hypothesis 4 (H4). *Personality traits related to low self-esteem (laziness and loneliness) negatively predict the level of job satisfaction.*

Hypothesis 5 (H5). *Job satisfaction varies positively with interpersonal trust.*

3. Data and Methods

This research paper started from a set of questions formulated by SHARE-ERIC (Survey of Health, Ageing and Retirement in Europe—European Research Infrastructure Consortium). In 2017, SHARE-ERIC collected many observations used in this project, including more than 2000 of Romanian citizens aged 50 or more. From this data source, we were interested in eight categories, namely: AC—activities; CC—childhood circumstances; DN—demographics; GV_BIG5—personality traits; RA—retrospective accommodation; RE—retrospective employment; WQ—work quality, GV_ISCED—ISCED standards for classifying education [64].

We observed several scientific principles that ensure robust research. First we use reliable data sources, which a methodology of transparent and supportive of replication. Secondly, named the triangulation principle, means we rely on many different but convergent approaches, techniques, and tools to properly investigate complex phenomena. Third, we employ the golden rule of cross-validation (using the *cvlasso* command in Stata) for identifying solid influences and avoid over-fitting (using the *rlasso* command in Stata using the rigorous LASSO or Least Absolute Shrinkage and Selection Operator procedure).

For merging multiple sources into a distinct data file for each of those eight aforementioned categories, finally we used 1:1 join statements in Stata 16. The next steps consisted in effective data processing, including renaming, numerical scale derivations, and missing values' treatment, done mostly using functions and facilities available both in spreadsheet programs and in the Open Refine tool. All these steps preceded the use of automatic variable selection procedures, acting as a sort of data mining that was followed by statistical analysis. One of the most important derivations started from lists of declared residences for each respondent, by which we divided the data set by region, specifically seven large Romanian development regions, namely: C or the central region (counties of Mureș, Harghita, Covasna, Brașov, Sibiu, Alba, and Hunedoara), W or the western region (counties of Arad, Timișoara, Hunedoara, and Caraș-Severin), NW or the north-western region (counties of Bistrița-Năsăud, Cluj, Maramureș, Satu-Mare, Bihor, and Sălaj), SW or the south-western region (counties of Mehedinți, Dolj, Gorj, Vâlcea and Olt), S or the southern region (counties of Arges, Dâmbovița, Prahova, Teleorman, Călărași, Ialomița, Ilfov, and the capital city, Bucharest), SE or the south-eastern region (counties of Vrancea, Galați, Brăila, Buzău, Tulcea, and Constanța), and NE or the north-eastern region (counties of Suceava, Botoșani, Neamț, Iași, Bacău, and Vaslui).

When processing the data for this region (Romania), we aimed for clear and trustful answers, and were also cognizant of traditional treatment procedures for missing values and their effect on classifier accuracy [65]. Still, we did not assimilate missing values, responses of undecided, or unwillingness to answer to a given value of the original scale, but rather generated an extra grade (usually a middle one—Tables 1–3, the value of 2 in the 0–4 derived scale); this came with the cost of artificially generated variance, but ensured a more balanced approach with more realistic values for the coefficient of determination (R squared), the accuracy of classification, and the ratios between the magnitudes of the most

powerful resulting influences. The processed dataset served as input for further variable selection procedures and regression analysis in Stata 16.

To analyze the determinant factors that influence the probability of being fully satisfied with the job (compl_satisf_with_my_job was true (i.e., equal to one) when_satisf_with_my_job/wq727 was responded to at maximum Likert value (four) and otherwise false (i.e., equal to zero), as seen in Tables 1–3) in our proposed models, we have started from a well-known econometric model (Equation (1)) applicable to such a phenomenon, namely the binary logistic regression model [26]:

$$Logit(p) = \beta_0 + \sum_{k=1}^{m} \beta_k * X_k + \varepsilon$$
(1)

where:

p is the probability of being satisfied with the job;

k is the total number of independent variables, k = 2, ..., m;

 β_k is the effect of a change in variable Xk on the probability of the analyzed state of the outcome (being satisfied with the job);

 X_k is one explanatory variable (Equation (1)) from the array (Σ) of the features in Table 1; and

 ε represents the error term.

Binary logistic regressions have been used to support robustness checks of the dualcore, and, to confirm particular regional influences, cases were filtered from among the remaining influences with respect to: lower p values corresponding to the size of errors when compared to that of coefficients; lower VIF (Variance Inflation Factor) values as proofs of a lack of collinearity—usually less than 10 [66]; higher values resulting from goodnessof-fit (GOF) tests [67] both for p values (to reject the null hypothesis) and chi square; higher values for the Area Under the Curve of Receiver Operating Characteristic, known as AUCROC, AUROC or shortly, ROC [68] and indicating the accuracy of classification for a scenario/model; and larger R-square values which suggest better explanatory power for the resulting models.

The descriptive statistics, containing the list of variables selected for this study, are available as two subparts (Tables 2 and 3), with four subsets each, which have been presented in descending order of the total number of observations for each. More details and explanations about these variables are available in Table 1. All study sites (Tables 2 and 3) reveal, from the very beginning, noticeable differences in terms of average intensity of the primary outcome and several possible predictors assumed to be most related with the phenomenon. Tables 2 and 3 present the summary statistics for the entire dataset and the first three development regions and the other remaining four ones.

The Original Name of the Variables	The Name of the Variables after Processing	Question	Coding
wq727_	how_satisf_with_my_job	Overall, were you satisfied with your job? (completely agree: 4; agree: 3; blanks, undecided & unwilling: 2; disagree: 1; completely disagree: 0)	0–4 scale
how_satisf_with_my_job	compl_satisf_with_my_job (OUTCOME)	Overall, were you satisfied with your job? $(4: 1; 0-3: 0)$	1-yes, 0-no
wq008_	opportunity_to_develop_new_skills	Have you had the opportunity to develop new skills? (same scale as for <i>how_satisf_with_my_job</i>)	0–4 scale
wq009_	deserved_recog_for_my_work	Did you receive the recognition you consider you deserved for your work? (same scale as for <i>how_satisf_with_my_job</i>)	0–4 scale
wq011_	job_appropriate_support_in_difficulties	Have you received appropriate support in difficult situations at your job? (same scale as for <i>how_satisf_with_my_job</i>)	0–4 scale
wq012_	colleague_good_atmosphere	Was there a good atmosphere between you and your colleagues? (same scale as for <i>how_satisf_with_my_job</i>)	0–4 scale
wq014_	health_protect_from_authorities	Have the authorities taken appropriate measures to protect you from health hazards at work? (same scale as for <i>how_satisf_with_my_job</i>)	0–4 scale
re014_1 20	number_of_jobs (derived by counting distinct non-blanks)	How many jobs did you have?	0–7 scale
re031_1	retirement_cause_left_1st_job	Was the retirement the reason for leaving the 1st job?	1—yes, 0—no
re035_1	retired_from_work_after1st_job	Was your situation "retired from work" after first job?	1—yes, 0—no
re038_1	paid_job_after_retirement	Did you have a paid job after retirement? (yes: 2; blanks, undecided: 1; no: 0)	0–2 scale
isced2011_r	graduated_high_school	Have you graduated the high school? (ISCDE2011 >= 3 and NOT for blanks/Still in school: 1)	1—yes, 0—no
ac012_	how_satisf_with_my_life	How satisfied are you with your life? (on a scale from 0 to 10, completely dissatisfied: 0, completely satisfied: 10; blanks, undecided & unwilling: 5)	11-point scale
how_satisf_with_my_life	satisf_with_my_life	How satisfied are you with your life? (0–7: 0; 8–10: 1)	1—yes, 0—no
ac015_	how_often_feel_no_control	How often do you feel that you have no control over what is happening to you? (Often: 4; Sometimes: 3; blank, undecided, or unwilling: 2; Rarely: 1; Never: 0)	0–4 scale
ac016_	how_often_feel_neglected	How often do you feel neglected? (same scale as for <i>how_often_feel_no_control</i>)	0–4 scale
ac021_	how_often_feel_life_has_no_sense	How often do you think your life makes no sense? (same scale as for <i>how_often_feel_no_control</i>)	0–4 scale
ac024_	how_often_feel_life_is_full_of_opport	How often do you feel that life is full of opportunities? (same scale as for <i>how_often_feel_no_control</i>)	0–4 scale

 Table 1. Questionnaire's items considered in this study.

Table 1. Cont.

The Original Name of the Variables	The Name of the Variables after Processing	Question	Coding
bfi10_neuro	neuroticism	Do you consider yourself as a neurotic person in terms of Big Five personality inventory? (1.5, 2, 2.5, or low: 0; blank or 3: 1; 3.5, 4, 4.5, or high: 2)	0–2 scale
bfi10_extra	extraversion	Do you consider yourself as an extraverted person in terms of Big Five personality inventory? (same scale as for <i>neuroticism</i>)	0–2 scale
bfi10_agree	agreeableness	Do you consider yourself as an agreeable person in terms of Big Five personality inventory? (same scale as for <i>neuroticism</i>)	0–2 scale
bfi10_consc	consciousness	Do you consider yourself as a conscientious person in terms of Big Five personality inventory? (same scale as for <i>neuroticism</i>)	0–2 scale
bfi10_open	openness	Do you consider yourself as an open person in terms of Big Five personality inventory? (same scale as for <i>neuroticism</i>)	0–2 scale
ac701_	reserved	Do you consider yourself a reserved person? (Disagree strongly: 0; Disagree a little: 1; Neither agree nor disagree, don't know, or blank: 2; agree a little: 3; strongly agree: 4)	0–4 scale
ac702_	interpersonal_trust	Do you consider yourself a person who generally trusts others? (same scale as for <i>reserved</i>)	0–4 scale
ac703_	laziness	Do you consider yourself a person who tends to be lazy? (same scale as for <i>reserved</i>)	0–4 scale
cc729_	loneliness	In your childhood (6–16 years), how often did you feel alone because you did not have friends? (same scale as for <i>how_often_feel_no_control</i>)	0–4 scale
cc733_	family_financial_welfare	Was your family well off financially, above average or poor? (poor: 0; above average, blank or other: 1; well off: 2)	0–2 scale
ra017_1 17	urbanity_level (derivation to determine it based on last residence)	What is the urbanity level considering your last area of residence? (Rural area or village: 0; small town or blank: 1; big, large town, suburbia of a metropolis: 2)	0–2 scale
dn003_	birth_year	What is your year of birth?	year
ra015c_1 17	last_country_region (filter derivation triggered by cascade conditions)	What is the last country region in which you have the residence?	regions

Source: authors' contribution.

	2052		Std.			402		Std.			389		Std.			330		Std.		
Variable	Obs. All	Mean	Dev.	Min	Max	Obs. NW	Mean	Dev.	Min	Max	Obs. SE	Mean	Dev.	Min	Max	Obs. NE	Mean	Dev.	Min	Max
how satisf with my job		2.83	0.97	0	4		2.92	1	0	4		2 77	1.02	0	4		2 65	0.95	0	4
compl satisf with my job		0.31	0.46	õ	1		0.39	0.49	õ	1		0.3	0.46	Õ	1		0.21	0.41	ŏ	1
opportunity to develop new skills		2.26	1.15	Õ	4		2.61	1.2	Õ	4		2.2	1.15	Õ	4		1.89	1.09	Õ	4
deserved recog for my work		2.38	1.1	Õ	$\overline{4}$		2.51	1.17	ŏ	$\overline{4}$		2.42	1.07	Õ	$\overline{4}$		2.13	1.01	Õ	4
job appropriate support in difficulties		2.31	1.09	0	4		2.49	1.14	0	4		2.25	1.1	0	4		2.16	1.01	0	4
colleague good atmosphere		2.94	0.92	0	4		3.08	0.93	0	4		2.96	0.86	0	4		2.76	0.98	0	4
health protect from authorities		2.49	1.09	0	4		2.39	1.25	0	4		2.42	1.12	0	4		2.34	0.99	0	4
number of jobs		1.64	1.22	0	7		1.58	1.25	0	7		1.92	1.41	0	6		1.45	1.18	0	7
retirement cause left 1st job		0.23	0.42	0	1		0.21	0.41	0	1		0.17	0.38	0	1		0.21	0.41	0	1
retired from work after1st job		0.38	0.48	0	1		0.4	0.49	0	1		0.35	0.48	0	1		0.28	0.45	0	1
paid_job_after_retirement		0.41	0.6	0	2		0.4	0.57	0	2		0.42	0.61	0	2		0.46	0.61	0	2
graduated high school		0.51	0.5	0	1		0.42	0.49	0	1		0.49	0.5	0	1		0.5	0.5	0	1
how_satisf_with_my_life		7.36	2.16	0	10		7.18	2.6	0	10		7.05	2.21	0	10		7.44	2.1	0	10
satisf_with_my_life		0.59	0.49	0	1		0.55	0.5	0	1		0.55	0.5	0	1		0.62	0.49	0	1
how_often_feel_no_control		1.6	1.51	0	4		1.75	1.55	0	4		1.71	1.54	0	4		1.67	1.55	0	4
how_often_feel_neglected		1.03	1.38	0	4		1.1	1.42	0	4		1	1.33	0	4		1.03	1.43	0	4
how_often_feel_life_has_no_sense		1.05	1.39	0	4		1.09	1.52	0	4		0.98	1.33	0	4		1.1	1.48	0	4
how_often_feel_life_is_full_of_opport		2.39	1.34	0	4		2.2	1.45	0	4		2.47	1.33	0	4		2.43	1.32	0	4
neuroticism		0.86	0.84	0	2		0.86	0.83	0	2		0.88	0.86	0	2		1.04	0.84	0	2
extraversion		1.56	0.67	0	2		1.6	0.64	0	2		1.62	0.63	0	2		1.56	0.68	0	2
agreeableness		1.48	0.73	0	2		1.59	0.62	0	2		1.51	0.71	0	2		1.24	0.83	0	2
consciousness		1.76	0.53	0	2		1.84	0.43	0	2		1.81	0.48	0	2		1.85	0.41	0	2
openness		1.15	0.8	0	2		1.14	0.8	0	2		1.05	0.82	0	2		1.26	0.78	0	2
reserved		1.79	1.39	0	4		1.37	1.52	0	4		1.72	1.33	0	4		1.76	1.2	0	4
interpersonal_trust		2.68	1.2	0	4		2.81	1.31	0	4		2.57	1.15	0	4		2.46	1.17	0	4
laziness		0.75	1.19	0	4		0.44	0.96	0	4		0.66	1.01	0	4		0.56	1.06	0	4
loneliness		0.65	1.17	0	4		0.24	0.82	0	4		0.63	1.08	0	4		0.74	1.32	0	4
family_financial_welfare		0.85	0.72	0	2		0.69	0.7	0	2		0.8	0.72	0	2		0.96	0.74	0	2
urbanity_level		0.45	0.7	0			0.3	0.57	0	2		0.52	0.77	0	2		0.28	0.54	0	2
birth_year		1951.28	9.42	1917	1967		1950.76	9.09	1924	1967		1952.14	9.21	1922	1967		1951.06	10.15	1920	1967

Table 2. Summary statistics for the entire dataset and the first three development regions.

Source: Own calculations in Stata 16.

271 Obs. SW	Mean	Std. Dev.	Min	Max	269 Obs. S	Mean	Std. Dev.	Min	Max	246 Obs. W	Mean	Std. Dev.	Min	Max	145 Obs. C	Mean	Std. Dev.	Min	Max
	2.88	0.93	0	4		2.86	0.93	0	4		2.78	0.94	0	4		3.16	0.98	0	4
	0.32	0.47	Õ	1		0.32	0.47	Õ	1		0.24	0.43	Õ	1		0.51	0.5	Õ	1
	2.44	1.08	0	4		2.39	1.05	0	4		2.02	1.07	0	4		2.11	1.2	0	4
	2.44	1.13	0	4		2.43	1.07	0	4		2.28	1.04	0	4		2.49	1.18	0	4
	2.46	1.09	0	4		2.33	1.02	0	4		2.11	1.08	0	4		2.37	1.12	0	4
	2.96	0.89	0	4		2.89	0.87	1	4		2.82	0.92	1	4		3.19	0.88	0	4
	2.63	1.04	0	4		2.57	0.96	0	4		2.44	1.03	0	4		2.95	1	0	4
	1.59	1.1	0	5		1.43	1.04	0	5		1.7	1.16	0	6		1.92	1.15	0	5
	0.23	0.42	0	1		0.32	0.47	0	1		0.32	0.47	0	1		0.19	0.39	0	1
	0.36	0.48	0	1		0.41	0.49	0	1		0.53	0.5	0	1		0.27	0.44	0	1
	0.42	0.61	0	2		0.4	0.56	0	2		0.32	0.59	0	2		0.41	0.66	0	2
	0.67	0.47	0	1		0.56	0.5	0	1		0.46	0.5	0	1		0.47	0.5	0	1
	8.1	1.62	1	10		7.51	1.93	0	10		7.14	2.02	0	10		7.19	1.98	0	10
	0.73	0.44	0	1		0.62	0.49	0	1		0.51	0.5	0	1		0.54	0.5	0	1
	1.27	1.42	0	4		1.62	1.58	0	4		1.62	1.38	0	4		1.27	1.4	0	4
	0.58	1.11	0	4		1.26	1.44	0	4		1.39	1.41	0	4		0.7	1.23	0	4
	0.69	1.11	0	4		1.17	1.46	0	4		1.29	1.33	0	4		1.02	1.35	0	4
	2.84	1.16	0	4		2.25	1.42	0	4		2.35	1.16	0	4		2.11	1.34	0	4
	0.61	0.8	0	2		0.83	0.83	0	2		0.92	0.78	0	2		0.77	0.89	0	2
	1.64	0.59	0	2		1.36	0.75	0	2		1.63	0.65	0	2		1.31	0.67	0	2
	1.62	0.68	0	2		1.48	0.68	0	2		1.27	0.8	0	2		1.72	0.63	0	2
	1.83	0.47	0	2		1.69	0.6	0	2		1.61	0.68	0	2		1.5	0.67	0	2
	1.1	0.85	0	2		1.13	0.8	0	2		1.2	0.78	0	2		1.21	0.77	0	2
	1.73	1.42	0	4		2.06	1.35	0	4		1.79	1.11	0	4		2.79	1.48	0	4
	2.72	1.16	0	4		2.64	1.16	0	4		2.69	1.09	0	4		3.06	1.21	0	4
	0.36	0.79	0	4		0.75	1.05	0	4		1.45	1.34	0	4		1.86	1.78	0	4
	0.47	0.99	0	4		0.95	1.42	0	4		1.24	1.31	0	4		0.34	0.8	0	4
	0.95	0.73	0	2		1.03	0.68	0	2		0.67	0.65	0	2		1.02	0.7	0	2
	0.55	0.76	0	2		0.6	0.8	0	2		0.54	0.76	0	2		0.52	0.62	0	2
	1953.55	8.75	1927	1967		1950.66	9.6	1917	1967		1949.37	9	1928	1967		1951.15	9.93	1921	1966
	271 Obs. SW	271 Obs. SW Mean 2.88 0.32 0.32 2.44 2.44 2.46 2.96 2.63 1.59 0.23 0.36 0.42 0.67 8.1 0.73 1.27 0.58 0.69 2.84 0.61 1.64 1.62 1.83 1.1 1.73 2.72 0.36 0.47 0.95 0.55 1953.55	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	$\begin{array}{c c c c c c c c c c c c c c c c c c c $	$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	$\begin{array}{c c c c c c c c c c c c c c c c c c c $	$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$

Table 3. Summary statistics for the other four development regions.

Source: Own calculations in Stata 16.

4. Results and Discussion

In terms of merging the original vertically partitioned data subsets, we finally chose a 1:1 merge statement in Stata 16. For cleaning the data and performing additional derivations, in most cases, the spreadsheets' immediate visual feedback and insight, powerful built-in and user-defined functions, customizable filters for particular text patterns, and fast autofill and split-text-to-columns facilities, were deemed adequate for performing manual cleaning tasks.

We also filtered the resulting dataset, corresponding to Wave 7 (2017), by considering the original field W7-ac_country set with the value of "Romania", for which we had 2144 unique records. Then, we conditioned the variable dn003_ (birth year) at less than or equal to 1967 to retreive only those responses of Romanian people aged 50 or more, of which there were 2056. Next, to identify the specific subsets corresponding to those seven development regions in terms of last declared residence, we started from those 2056 filtered records above and used a cascade of IFs to generate the last non-blank residence by considering the related fields (from ra025c_1 to ra025c_30). Thus, we obtained 2052 records corresponding to the observations mentioned in Tables 2–5. The difference with the previous filtered amount of 2056 records consisted in only four observations with unspecified last residence, which were consequently dropped.

We performed binary logistic regressions for Romania overall and for its seven development regions and preserved only those influences satisfying selection rules depending on: significance (p), VIF, GOF, AUCROC, and R-sq. values. Next, we performed postestimations and reported the average marginal effects (not raw coefficients) to ensure support for comparability when the magnitude was concerned for both intra- and interscenarios/models' comparisons. These average marginal effects have been reported in two subparts (Tables 4 and 5) in descending order of the total number of observations for each regional subset resulting from last residence and considering two scenarios for each: only the dual-core (a, c, e, g, i, k, m, o) and the dual-core plus particular influences (b, d, f, h, j, l, n, p). Tables 4 and 5 present Romania overall and the first three regions and, also, the last four comparable regional models, respectively, in terms of average marginal effects on job satisfaction, with the specifications that: (1) the source was represented by its own calculations in Stata 16, and (2) standard errors were between round parentheses; (3) *, **, ***, **** indicate significance at 10%, 5%, 1%, and 1‰.

Assuming predictors' potential high correlation and models' overfitting as usual reasons for too-high R squared values, we performed additional post estimations, such as the maximum correlation coefficient in predictors' matrices for each model in Tables 4 and 5. All these values were well below the limit of 0.7, beyond which we usually observe a high correlation between predictors. Moreover, we assessed the computed VIFs in OLS (ordinary least squares regressions) against dynamic thresholds acting as maximum acceptable values, depending on models' explanatory power $(1/(1-R^2))$. Our results indicated that all models in Tables 4 and 5 met these threshold conditions. They reconfirmed the lack of multicollinearity.

Additionally, we applied the cvlasso and the rlasso commands for each already reported model. The latter, rlasso (or the rigorous LASSO variable selection procedure), is a well-known penalizing method to control overfitting and it removed none of the variables already reported in Tables 4 and 5.

Dataset/Subset	А	.11	N	W	S	E	N	E
Variables/Scenarios	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)
deserved_recog_for_my_work	0.0825 ****	0.0551 **** (0.0068)	0.0818 ****	0.0677 **** (0.0107)	0.101 **** (0.0141)	0.0893 **** (0.0147)	0.0708 **** (0.0144)	0.0462 ***
colleague_good_atmosphere	0.2137 ****	0.1949 **** (0.0084)	0.2069 ****	0.1716 ****	0.2029 ****	0.2057 ****	0.1843 ****	0.164 ****
opportunity_to_develop_new_skills	(0.0077)	0.0175 ***	(0.0100)	0.0481 ****	(0.0200)	(0.010))	(0.0170)	(0.0177)
job_appropriate_support_in_difficulties		0.0176 **		(0.0100)				
health_protect_from_authorities		0.0274 ****						0.0334 **
number_of_jobs		(0.0005)						0.0474 ****
retirement_cause_left_1st_job				0.0566 *				(0.0143)
paid_job_after_retirement				-0.0657 **				
how_often_feel_life_has_no_sense				(0.0299)				0.0269 **
how_often_feel_life_is_full_of_opport		0.0118 **				0.0315 **		(0.0118)
openness		0.028 ***		0.0833 ****		(0.0132)		
interpersonal_trust		(0.0092)		(0.0192)		0.0324 **		
laziness						(0.0134)		-0.0558 ***
loneliness		-0.0228 ****		-0.0325 *				(0.0180)
family_financial_welfare		0.0357 ****		(0.0194)				0.0468 **
urbanity_level		(0.0104) 0.0324 *** (0.0104)						(0.0230)
Pseudo R square Value for area under ROC curve	0.3839 0.8893	0.4266 0.9059	0.4528 0.9137	0.5452 0.936	0.3793 0.8846	0.4038 0.8952	0.3546 0.8873	$0.45 \\ 0.9173$
Max Variance Inflation Factor	5.88	9.96	6.26	9.82	6.42	7.89	5.21	9.29
MaxAbsCorCoetPredMtrx Observations	0.3539 2052	0.5275 2052	$\begin{array}{c} 0.4010\\ 402 \end{array}$	0.5534 402	0.3543 389	0.3543 389	0.3317 330	0.4509 330

Table 4. The overall and the first three comparable regional models in terms of average marginal effects on full job satisfaction—binary logistic regressions.

Source: Own calculations in Stata 16. Notes: Standard errors in parentheses. *, **, **** indicate significance at 10%, 5%, 1%, and 1‰.

Dataset/Subset	SV	V	5	5	И	V	(
Variables/Scenarios	(i)	(j)	(k)	(1)	(m)	(n)	(0)	(p)
deserved_recog_for_my_work	0.0662 ****	0.0528 ****	0.0471 **	0.0479 ***	0.1118 ****	0.0903 ****	0.0792 ****	0.0715 ****
colleague_good_atmosphere	(0.0118) 0.2385 **** (0.0178)	(0.0116) 0.1996 **** (0.0133)	(0.0192) 0.2374 **** (0.0211)	(0.0186) 0.2135 **** (0.0200)	(0.0216) 0.1346 **** (0.0277)	(0.0197) 0.1007 **** (0.0263)	(0.0229) 0.2638 **** (0.0220)	(0.0213) 0.2403 **** (0.0204)
retired_from_work_after1st_job	(,	(1111)	()	()	()	0.1558 ****	()	(,
graduated_high_school						(0.0485) 0.1189 *** (0.0440)		
satisf_with_my_life								-0.112 **
how_often_feel_no_control		0.0447 ****		-0.035 *** (0.0132)				(0.0372)
how_often_feel_neglected		(0.0120)		(0.0102)		0.0377 **		
how_often_feel_life_is_full_of_opport		0.0719 ****				(0.0177)		
openness		0.0549 *** (0.0197)						
reserved		0.0214 *						0.0425 **
laziness		(0.0118)				-0.0348 *		0.0467 ***
loneliness						(0.0199) -0.0415 ** (0.0194)		(0.0177)
family_financial_welfare		0.0784 ****		0.0907 ***		(0.01) 1)		0.0698 *
urbanity_level		(0.0226)		(0.0298) 0.0612 ** (0.0251)				(0.0407)
Pseudo R square Value for area under ROC curve Max Variance Inflation Factor MaxAbsCorCoefPredMtrx Observations	0.4912 0.9308 5.67 0.3219 271	0.6351 0.9614 9.65 0.3225 271	$\begin{array}{c} 0.3598 \\ 0.8842 \\ 7.51 \\ 0.4634 \\ 269 \end{array}$	$\begin{array}{c} 0.4401 \\ 0.9095 \\ 9.89 \\ 0.4634 \\ 269 \end{array}$	$\begin{array}{c} 0.2372 \\ 0.8119 \\ 4.84 \\ 0.2051 \\ 246 \end{array}$	$\begin{array}{c} 0.3415\\ 0.8708\\ 6.01\\ 0.3533\\ 246\end{array}$	$\begin{array}{c} 0.349 \\ 0.8491 \\ 5.4 \\ 0.2723 \\ 145 \end{array}$	0.5047 0.9262 8.2 0.5296 145

Table 5. The other four comparable regional models in terms of average marginal effects on full job satisfaction—binary logistic regressions.

Source: Own calculations in Stata 16. Notes: Standard errors in parentheses. *, **, ***, **** indicate significance at 10%, 5%, 1%, and 1‰.

Moreover, we compared the values for the explanatory power (pseudo R²), the Wald statistics (Wald chi²(2)), and the maximum correlation coefficient between predictors for concurrent ordinal logit models when considering the reverse causality that often causes endogeneity problems. In these tests, we have first chose variables in the dual-core and a variable to analyze that corresponds with job satisfaction. Then we replaced the latter with each of the two (in their original form, meaning on a scale) by interchanging their roles. The results indicated better scores (largest Wald chi²(2), pseudo R², and lowest correlation coefficient) when considering job satisfaction as the variable to analyze and the other two as predictors, rather than vice versa (e.g., work atmosphere/work gave recognition as outcome).

The results, after performing logistic regressions revealed interesting relationships. In the overall model (N = 2052, Table 4), scenarios (a) and (b) underline the most powerful and significant dual-core of the models and rankings in terms of importance (both intrinsic and extrinsic factors; recognition and working condition; good atmosphere between colleagues). The model based only on this dual-core (Table 4, scenario a) is powerful enough in terms of accuracy of classification (good to excellent for an AUCROC value of 0.8893), while the maximum VIF < 6 (way below 10) leaves enough room to further identify and consider other specific influences.

The value of Pseudo R square (0.3839) indicates good explanatory power for this simplified model. Therefore, these very promising results for the overall dataset encouraged us to explore further and test several hypotheses to identify particular patterns for each of the seven Romanian development regions. Hence, we additionally discovered the positive role exerted by existing opportunities to develop new skills, appropriate support in difficult situations at the workplace, protective measures from authorities in case of health hazards, how often the individual feels that life is full of opportunity, the manifestation of openness as a Big Five individual feature, family financial well-being, and the urbanity level of the respondent's residence. The only negative influence discovered for this overall model (and most comprehensive set of specifications (Table 4, scenario b)) is afferent to loneliness in childhood. The Pseudo R square (0.4266) increased significantly when adding these eight influences, as did the accuracy of classification (0.9059), which then becames excellent (AUCROC > 0.9), while collinearity remained acceptable (maximum VIF < 10).

First, in terms of regional models, when considering the north-west region of Romania, the dual-core is confirmed in the same order of its two components as in the overall model. In fact, this finding was valid for all regional models. Besides these basic findings, we emphasized other positive and negative influences on job satisfaction. Hence, the only negative findings corresponded to loneliness and an individual's choice to perform paid work after retirement, suggesting that a low esteem behavior indeed negatively influences job satisfaction. Positive influences on job satisfaction were displayed by individuals who had the opportunity to develop new skills, who had retired from their first job, and those who considered themselves open persons. In this regional model, the explanatory power (pseudo-R square of 0.4528 and 0.5452), accuracy of classification (excellent for AUCROC of 0.9137 and 0.936), and accepted collinearity (maximum VIF of 6.26 and 9.82) indicated better values for both the simple and the most comprehensive sets of specifications (Table 4, scenarios c and d) than the ones obtained for the overall model above.

Second, for the adults from SE, besides the accent put on the previous dual-core foundation, other positive influences for job satisfaction corresponded to just two other variables: interpersonal trust and opportunity. More precisely, based on these two additional findings, we can state that the higher the level of trust in other people, the greatest career satisfaction. In addition, the more often a person has the belief that life is full of opportunity (optimism and ambition as traits), the higher the level of career satisfaction. For this particular region, all three indicators (pseudo-R square, AUCROC, and maximum VIF) recorded good-to-excellent values (0.3793 and 0.4038; 0.8846 and 0.8952; 6.42 and 7.89), close to those of the overall model.

Third, in NE Romania, besides the already identified dual-core, which indicated the lowest magnitude for its first component, deserved recognition for, in comparison with the rest of regions. Some other predictors are underlined below. The only negative influence was laziness, suggesting that the job satisfaction becomes low in the case of a person who tends to be lazy and avoid high-pressure jobs. Accordingly, a rational individual who understands the negative consequences of idleness on the organizational status-quo and personal achievement tends to experience lower levels of career satisfaction. The additional positive determinants, except the dual-core, were: no previous jobs (number_of_jobs), family finance (family_financial_welfare), job protection and security (health_protect_from_authorities), and meaningfullness of life (how_often_feel_life_has_no_sense). Consequently, for this specific region, we can state that the more an individual has changed jobs, the more career satisfaction they find. The same positive relationship manifests when the well-being of one's family is greater, when employers regularly take appropriate measures toward workplace safety, and the frequency with which one feels their life is meaningless. The influence of the last variable is quite strange, suggesting that meaning in life plays a negative role on career satisfaction, since much other research emphasized an opposite role of meaning in life in life satisfaction [69]. We can understand this influence only in the following terms: sometimes, compromises in one's personal life may lead to unexpected career success, but mostly because of a so-called work-life (im)balance. For this particular area, especially when considering the second, most comprehensive scenario (Table 4, scenario h), all three indicators above (pseudo-R square, AUCROC, and maximum VIF) recorded better values than in the case of the overall model.

Fourth, SW Romania revealed other interesting influences. Here, we have not identified any negative predictors of job satisfaction (Table 5, scenario j), only positive ones, for example, better familial economic circumstances impact career satisfaction. Also, personality traits, such as openness and being reserved, seem to be positive predictors. If a person holds the belief that life is full of opportunity more strongly, then their career satisfaction increases. Finally, feeling increasingly helpless over the circumstances of one's life positively influence job satisfaction, revealing a particular attitude in such individuals: they put a greater emphasis on external loci of control when expressing career satisfaction, feeling that they are not agent in their. For this region (Table 5, scenarios i and j), all three indicators above (pseudo-R square, AUCROC, and maximum VIF) recorded better values than in the case of the overall model.

Fifth, Romania's southern region presents a series of elements that differ in comparison with other regions. For instance, feelings of diminishing agency in one's life negatively influenced job satisfaction, suggesting a greater emphasis on an internal locus of control, a finding in contradiction with those in the SW region. Family welfare represented the factor of greatest magnitude, and was found to positively influence career satisfaction. Novel to the southern region model was the positive role played by urbanity, suggesting that the individuals who have their permanent residence in urban areas, here, are more satisfied with their career, we surmise due to better opportunities, infrastructure, and mobility. For this region and especially with consideration to the second, most comprehensive scenario (Table 5, scenario l), all three indicators above (pseudo-R square, AUCROC, and maximum VIF) indicated better values than the same in the overall model.

Western Romania expressed different attitudes towards career satisfaction. Those who retired from the only job they had ever had were more satisfied with it (loyalty to the workplace, commitment, and orientation on a very long term). Moreover, those who had graduated from high school were more satisfied with their career, as were those who felt neglected more often, which is likely a function of balance between work and life. In addition, for this particular region, attitudes of laziness and loneliness betray low selfesteem and negatively affect job satisfaction. Though good-to-excellent in terms of accuracy (AUCROC = 0.8708, Table 5, scenario n), with a decent explanatory power (pseudo-R square of 0.3415) and acceptable collinearity (maximum VIF of 6.01), this regional model had the lowest value of the second indicator (colleague_good_atmosphere).

Finally, central Romania emphasized other specific predictors and different additional influences. Our most intriguing finding, here, regards a negative relationship between life satisfaction and job satisfaction, a finding that contradicts much other research [58], but which may be explained with reference to work-life balance [70]. In addition, analysis of introspections about laziness in this population challenged established perspectives; those who regarded themselves as having become lazier also expressed more job satisfaction. As correlation, this was also found by Dalal [71]. Several positive influences were related to the economic security of the family and to introversion (in our case, reserved personalities). For this region, especially when considering the second, most comprehensive scenario (Table 5, scenario p), all three indicators (pseudo-R square, AUCROC, and maximum VIF) recorded better values than those of the overall model.

The results above (Tables 4 and 5) clearly indicate that for respondents from the western region of Romani (W), receiving deserved recognition mattered most (it had almost the same magnitude of effect as workplace atmosphere) when compared with the other regions (confirmation of the second hypothesis, H2). We expected that, in light of our previous research, results from this region, which geographically included Transylvania under the former Habsburg occupation, showed patterned differences with respect to immigration and moral attitudes regarding generational differences and job satisfaction in those with considerable work experience [60]. The additional results in Table 5 (the most comprehensive scenarios of our regional models) clearly indicate further evidence for impact of financial well-being of the family (family_financial_welfare) on job satisfaction. We analyzed this further, together with the dual-core, by using a binary logistic model; family financial welfare passed all checks but not with the same significance as the dual-core (usually ** or ***), when considered together with it. Consequently, we consider familial financial well-being an interesting predictor of job satisfaction (and confirmation of the second part of the third hypothesis, H3); better familial economic security may positively influence career satisfaction due to increased psychological comfort, greater confidence in personal ability and aptitude, and less career uncertainty. Moreover, these results emphasized that life satisfaction is not always positively correlated with job satisfaction (a rejection of the first part of H3), in some cases acting as a negative predictor of job satisfaction (Table 5, scenario p). In addition, the influence of laziness in W opposes C, which showed a positive influence, and NE and W, where it showed a negative influence on full job satisfaction; we take this to be a partial rejection of H4. The positive influence of interpersonal trust (although only in respondents from SE) partially confirmed H5. Further, degree of urbanity was positively correlated with job satisfaction (Table 4—scenario b, the overall model; Table 5-scenario l, region S). In addition, we must emphasize the positive influence associated with the respondent's number of jobs held (Table 4—scenario h, NE).

The results in Tables 6 and 7 show the strongest influences, which persisted even when the regression model was changed (i.e., using ordinal logistic regression operating on the entire 0–4 scale of job satisfaction instead of the binary logistic ones).

Dataset/Subset	Α	11	Ν	W	S	E	NE			
Variables/Scenarios	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)		
deserved_recog_for_my_work	0.7852 **** (0.0510)	0.5166 **** (0.0571)	0.9084 **** (0.1197)	0.8923 **** (0.1262)	1.4233 **** (0.1544)	1.3595 **** (0.1551)	0.6323 **** (0.1253)	0.4526 **** (0.1357)		
colleague_good_atmosphere	1.8076 **** (0.0697)	1.6952 **** (0.0726)	1.9259 **** (0.1672)	1.5924 **** (0.1927)	1.5535 **** (0.1673)	1.6701 **** (0.1761)	1.6020 **** (0.1559)	1.4596 **** (0.1647)		
opportunity_to_develop_new_skills		0.2129 **** (0.0481)		0.4786 **** (0.1115)						
job_appropriate_support_in_difficulties		0.1939 **** (0.0568)								
health_protect_from_authorities		0.4317 **** (0.0566)						0.5524 **** (0.1513)		
number_of_jobs								0.2207 ** (0.1024)		
retirement_cause_left_1st_job				1.0771 *** (0.3320)				(*******)		
paid_job_after_retirement				-0.6912 *** (0.2429)						
how_often_feel_life_has_no_sense								0.1125 (0.0772)		
how_often_feel_life_is_full_of_opport		0.0575 (0.0363)				0.1641 * (0.0843)				
openness		0.0591 (0.0580)		0.3607 ** (0.1488)		. ,				
interpersonal_trust						0.128 (0.0993)				
laziness								-0.1462 (0.1045)		
loneliness		-0.0106 (0.0389)		-0.143 (0.1434)				(******)		
family_financial_welfare		0.1418 ** (0.0667)		(0.2.20.2)				0.2555 * (0.1537)		
urbanity_level		0.1228 * (0.0674)						(012007)		
Pseudo R square	0.2847	0.3108	0.3595	0.41	0.3111 726 5235	0.3172	0.2325	0.2638		
bic	3837.8641	3760.6023	666.0897	646.4273	750.3049	755.9122	689.266	691.5758		
Observations	2052	2052	402	402	389	389	330	330		

Table 6. Testing previously identified influences for the Romania-overall and first three comparable regional models, using ordinal logistic regressions (raw coefficients).

Source: Own calculations in Stata 16. Notes: Standard errors in parentheses. *, **, ***, **** indicate significance at 10%, 5%, 1%, and 1‰.

Dataset/Subset	SV	V	ç	5	V	V	(2
Variables/Scenarios	(i)	(j)	(k)	(1)	(m)	(n)	(o)	(p)
deserved_recog_for_my_work	0.7792 ****	0.7348 ****	0.4814 ***	0.5016 ***	0.6141 ****	0.6470 ****	0.6325 ****	0.7656 ****
colleague_good_atmosphere	2.4310 **** (0.2331)	2.4728 **** (0.2408)	2.4303 **** (0.2287)	2.4452 **** (0.2337)	1.0152 **** (0.1592)	(0.1444) (0.8496^{****}) (0.1659)	2.3732 **** (0.2956)	(0.2047) 2.7134 **** (0.3414)
retired_from_work_after1st_job			, , , , , , , , , , , , , , , , , , ,			1.9431 **** (0.3153)		
graduated_high_school						0.5991 **		
satisf_with_my_life						(012001)		-0.7958 *
how_often_feel_no_control		0.0453		-0.1569 *				(0.12, 0)
how_often_feel_neglected		(0.1000)		(0.0000)		0.1879 *		
how_often_feel_life_is_full_of_opport		0.0852				(0.1022)		
openness		0.2599						
reserved		0.0091						0.1045
laziness		(0.0983)				-0.1428		(0.1344) 0.3523 ** (0.1445)
loneliness						(0.1070) -0.0639 (0.0989)		(0.1445)
family_financial_welfare		0.3983 **		0.2477		(0.0989)		0.6791 **
urbanity_level		(0.1939)		(0.2037) 0.2974 * (0.1757)				(0.3148)
Pseudo R square	0.3653	0.3783	0.3419	0.357	0.1236	0.2166	0.3566	0.4242
aic bic	437.2373 458.85	438.5455 478 1688	453.3172 474 8855	449.1483 481.5007	579.8284 600.8604	529.577 568 1356	226.3426 244 203	211.8255 241 5929
Observations	271	271	269	269	246	246	145	145

Table 7. Testing previously identified influences for the other four comparable regional models, using ordinal logistic regressions (raw coefficients).

Source: Own calculations in Stata 16. Notes: Standard errors in parentheses. *, **, ***, **** indicate significance at 10%, 5%, 1%, and 1‰.

Though not reported in this paper, additional regressions were performed for robustness checks of the two most powerful influences identified above (the dual-core), who's strength we ascribe to having used holistic questions. These checks considered three criteria about the respondent (marital status, gender, and having graduated high school) and revealed a strong dual-core irrespective of how the overall dataset for Romania was divided (whether along marital status, sex, or education). All these findings have been obtained by assimilating missing, undecided, or unwilling responses to a added median grade (i.e., 2 in a final scale from 0 to 4). Still, when considering just the dual-core in the overall model, in each of the seven regional models, and in the splits (subsets) above meant for robustness proofs, the maximum VIF left room for exploring and adding new specific influences on this dual-core foundation. Therefore, we consider our first hypothesis (H1) fully confirmed.

In future research, we intend to explore the peculiarities of other European regions in terms of both job and life satisfaction, starting from the datasets provided by the SHARE-ERIC consortium.

5. Conclusions

This paper confirms that a good workplace atmosphere and healthy relationships with colleagues and supervisors, together with a meritocratic reward system that recognizes effort, are the most important positive predictors of job satisfaction in Romanian people aged 50+. We found these highly significant in a model of all Romania, and in seven models of its developmental regions. From this dual-core model, working climate was weighted stronger than meritocratic recognition. A team atmosphere mattered most in the central region of Romania, while meritocracy recognition most powerful influenced its Western region.

Besides these predictors, we have also identified some other peculiarities for Romania as a whole, and some distinctions of its seven developmental regions. In some cases, the financial well-being of the family positively influenced job satisfaction, while elsewhere life satisfaction was significant, an atypical influence according to existing literature; we found that a high level of life satisfaction negatively influenced job satisfaction, a result that emphasized the importance of attitudes about work-life balance.

Affective personality traits, which are related to low self-esteem (laziness and loneliness), were not in all cases negative predictors of job satisfaction, as we had hypothesized. Unexpectedly, the individuals from the central region presented a positive impact of the tendency to be lazy or, more nuanced, to avoid high-pressure jobs, on career satisfaction. Reserved, shy or introverted persons from central and south-west Romania were more predisposed to job satisfaction, in contradiction with Lounsbury et al. [72] who found that extraverted employees in IT are more satisfied with their jobs than introverted ones. Those who are open to experience from the south- and north-western regions were more likely to be satisfied with their career, as emphasized by Ijaz and Khan [73]. A positive influence of increased interpersonal trust on job satisfaction was significant only for respondents of the south-east region. Other significant factors were education, and lifetime employment in a single job, which, for western-region adults over 50, counted more than the dual-core (team climate and reward system) for job satisfaction.

Finally, we propose that decision-makers should pay much more attention to the possibilities for human capital and employees' psychology resulting also from this study to promote employees' achieving sustainable career goals - itself asset to organizations and communities.

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Data Availability Statement: The data belong to SHARE-ERIC and can be obtained based on e-mail to this organization, with a declaration of use attached.

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