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Job Satisfaction and Employee Loyalty: A Causal Relationship Examined with the Use of Structural Equation Modelling

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ABSTRACT

Objective: Identification of the impact of job satisfaction on employee loyalty.

Research Design & Methods: A quantitative approach was applied. Critical analysis of literature and an expert panel was used to identify variables. A questionnaire study was carried out online

on the sample of 419 administrative and office employees. Structural equation modelling was used to examine the existence of the assumed relationship.

Findings: It has been proved that job satisfaction is a multidimensional construct. It is composed of three elements: 1) career development including the possibilities of training, development, realisation of passions and non-pay benefits, 2) physical job conditions including ventilation, bathrooms, social back office, noise and temperature level, as well as ergonomic standards of equipment, aesthetics of the workplace and 3) interpersonal relations covering relations with co-workers and supervisors, as well as social communication in the workplace. Each of these dimensions turned out to impact employee loyalty and this impact is statistically significant on a level $\alpha = 0.001$. The strongest impact occurs in case of the two intangible factors: career development (1.024), then interpersonal relations (0.902). For physical working conditions the impact is noticeably weaker (0.211).

Implications/Recommendations: It turned out that employee loyalty is strongly impacted by the intangible factors of the work environment. This observation may constitute an important human resources management tool for managers and in particular in the process of motivating the employees.

Contribution: Confirming the assumed relationship between the revealed dimensions of job satisfaction and employee loyalty with the use of a sophisticated multidimensional statistical analysis.

Article type: original article.

Keywords: employee satisfaction, job conditions, motivation, employee loyalty, work quality assurance.

JEL Classification: M5, M12.

1. Introduction

Having a job is a basic dimension of the human condition (Weber, 2011). In contemporary perspectives, job satisfaction ranks as one of the most commonly discussed and researched topics in the field of social sciences. The widely accepted belief that prioritising employee satisfaction is advantageous for organisations, with happy and fulfilled employees being especially valuable, has become universally recognised (Andrew, 2017; Chanda & Goyal, 2020). Therefore, over the years many authors have proposed tools for measuring job satisfaction (Smith, Kendall & Hulin, 1969; Spector, 1985; Bettencourt, Gwinner & Meuter, 2001), these are considered in detail in a study by van Saane *et al.* (2003).

However, some authors argue that few employees are really loyal and highlight the importance of recognising and maintaining loyalty (Knippen & Green, 1996). Thus, in every industry, employee loyalty should be considered a key element for the growth and sustainability of a business. Consequently, exploring the factors that could influence employee loyalty has become a significant area of research

(Farrukh, Kalimuthuan & Farrukh, 2019). The main objective of building employee loyalty is to achieve a situation in which employees will knowingly become committed, accept responsibilities and pursue them with their own best efforts. In order to achieve employee loyalty, the organisation must take good care of them (Antoncic & Antoncic, 2011). Loyal employees should be treated as very valuable assets, as they help organisations to make large profits. This is because they will take care of the customers in a better way and they understand customers' expectations and tend to meet them (Meyer & Allen, 1997; Michlitsch, 2000). Additionally, keeping loyal employees reduces the turnover rate, as they plan to stay with the organisation for longer. This avoids the additional costs of recruiting new employees, training them, losses in productivity caused by the new, unskilled employees, but, most importantly, to retain valuable experience and knowledge acquired by long-term employees (Hinkin & Tracey, 2000; Omar, Jusoff & Hussin, 2010).

Plenty of authors suggest the existence of a clear, strong and positive relationship between job satisfaction and employee loyalty, where satisfaction is claimed to be an important prerequisite of loyalty (Matzler & Renzl, 2006; Turkyilmaz *et al.*, 2011; Farrukh, Kalimuthuan & Farrukh, 2019; Murtiningsih, 2020; Nguyen *et al.*, 2020; Yuliyanti, 2020). Hence, in this paper we endeavoured to assess whether the forementioned causal relationship exists for administrative and office workers.

2. Relationship between Job Satisfaction and Employee Loyalty: Literature Review and Developing Hypotheses

Identifying the relationship between job satisfaction and employee loyalty is a difficult area of research. It encompasses hidden, not directly observable, and multidimensional aspects of measured phenomena and complex relationships between them. In this study it was assumed that job satisfaction is a construct formed by the three dimensions: 1) career development, 2) physical working conditions, and 3) interpersonal relations.

The first factor is career development. According to Razak *et al.* (2016), employee training and development must guarantee that a company possesses personnel with the requisite quality to attain its objectives. This can only be accomplished if employees possess the knowledge and skills necessary for efficient job performance, coupled with continuous improvement, thereby maximising their potential for growth (Urbancová & Vnoučková, 2018). Costen and Salazar (2011) also demonstrated that training and development possibilities strongly influence employee loyalty in the lodging industry. Later, Yuliyanti *et al.* (2020) showed that career development has a significant positive effect on job satisfaction and employee loyalty. It has also emerged as an important determinant of employee loyalty in an exploratory study by Pandey and Khare (2012). Urbancová and Vnoučková (2018)

revealed that recognising the significance of employee development is crucial for aligning the needs of both the employer and the employee within the employment relationship. This practice fosters commitment, loyalty, and enhanced performance in agricultural companies. Tarasco and Damato (2006) identified training in the form of ongoing professional development as an important contributory factor to employee satisfaction and loyalty. Ineson, Benke and László (2013) showed that career development impacts employee loyalty in the hotel industry. Taking this into consideration, the following hypotheses have been posed:

H1: Career development positively influences employee loyalty.

The second factor encompasses physical working conditions or technical aspects of the work environment. This is one of the drivers of employee loyalty in small and medium enterprises, as suggested by Nguyen *et al.* (2020). Turkyilmaz *et al.* (2011) revealed that working conditions were the second most important requirement for employee loyalty in the public sector. Abdullah *et al.* (2009), on the basis of their exploratory study, claim that working conditions seem to have a significant relationship to employee loyalty in the hotel industry. The results of another study (Yuliyanti *et al.*, 2020) show that the work environment has a significant positive effect on job satisfaction and employee loyalty. Lee and Jablin (1992) discovered that, among other factors, unsatisfactory job conditions lead to weak employee loyalty. Klopotań, Buntak and Drożdżek (2016) suggest that favourable working conditions lead to increases in both worker satisfaction and loyalty. Finally, in the well-known study presented by Heskett, Sasser and Schlesinger (1997), working conditions, among other factors, lead to job satisfaction and, ultimately, to higher levels of loyalty. Hence, the following hypotheses have been posed:

H2: Physical job conditions positively influence employee loyalty.

The third dimension encompassed interpersonal relations. Many authors believe that interpersonal relationships help in improving the level of satisfaction among employees which makes them stay in one organisation for a longer period of time (Prabhakar, 2016). Other researchers (Klopotań, Buntak & Drożdżek, 2016) suggest that if employees work with colleagues with whom they have a good relationship, and if there is a pleasant social atmosphere, they tend to be more satisfied and loyal. Also a correct, open relationship with a supervisor contributes to satisfaction and loyalty. According to Al-Hussami's (2008) research, those employees with whom a supervisor bonds and establishes an amicable relationship have higher employee loyalty than others. In another study, conducted by Yang *et al.* (2008), employees experiencing cooperation from colleagues and a collegial work environment turned out to be more satisfied with their job and more loyal to the organisation. Ineson, Benke and László (2013) showed that employee loyalty depends on social relationships at work in the hotel industry. Furthermore, Matzler and Renzl (2006) demonstrated that good interpersonal relationships, especially trust, positively influence

employee loyalty. Finally, interpersonal relationships are also said to be one of the creators of employee loyalty in small and medium enterprises, as discovered by Nguyen *et al.* (2020).

Considering these statements, the following hypothesis has been posed:

H3: Interpersonal relations positively influence employee loyalty.

The three hypotheses combined form a research model.

3. Research Method

For data collection, we employed a survey methodology utilising printed questionnaires distributed among respondents to gather a sufficient number of responses for testing the proposed model. The questionnaire comprised three sections: 1) observable variables measuring the quality of the services (15 variables), 2) variables characterising loyalty (4 variables), and 3) control variables (6 variables).

The initial stage of the project involved conceptualising the term “job satisfaction,” considering it as a multidimensional construct. The authors initiated this process by conducting a thorough analysis of the literature, identifying observable variables that were subsequently utilised in the empirical study. These observable variables are presented in Table 1.

Table 1. Job Satisfaction – Dimensions, Items and Their Sources

Dimension	Item	References
Career development (CAR)	CAR1: I am satisfied with the possibility of taking part in professional training in my company	Smith, Kendall & Hulin (1969), Churchill, Ford & Walker (1974), Pandey & Khare (2012), Munir & Rahman (2016), Urbanová & Vnoučková (2018), Yuliyanti <i>et al.</i> (2020), Dicke <i>et al.</i> (2020)
	CAR2: I am satisfied with the opportunities for professional development in my company	
	CAR3: I am satisfied with the possibility to realise my passion in my company	
	CAR4: I am satisfied with non-wage benefits	
Physical job conditions (PHY)	PHY1: I am satisfied with the ventilation at work	Smith, Kendall & Hulin (1969), Munir & Rahman (2016), Klopota, Buntak & Droždek (2016), Amin <i>et al.</i> (2021), Kuzey (2021), Karaferis, Aletras & Niakas (2022)
	PHY2: I am satisfied with the sanitary facilities at work	
	PHY3: I am satisfied with the social facilities at work	
	PHY4: I am satisfied with the ergonomics at work	
	PHY5: I am satisfied with the noise level at work	
	PHY6: I am satisfied with the temperature at work	
	PHY7: I am satisfied with the standard of the equipment in my workplace	
	PHY8: I am satisfied with the aesthetics of my workplace	

Table 1 cnt'd

Dimension	Item	References
Interpersonal relations (IRE)	IRE1: I am satisfied with my relationships with co-workers	Smith, Kendall & Hulin (1969), Matzler & Renzl (2006), Munir & Rahman (2016), Prabhakar (2016), Kuzey (2021), Karaferis, Aletras & Niakas (2022)
	IRE2: I am satisfied with my relationships with my supervisors	
	IRE3: I am satisfied with communication at work	

Source: the authors.

In the second phase, conceptualisation of the term “employee loyalty” was considered. The authors carried out a critical literature analysis, the results of which are shown in Table 2 as observable variables and their sources.

Table 2. Employee Loyalty – Items and Their Sources

Construct	Item	References
Employee loyalty (LOY)	LOY1: I think my company is a very good employer	Dick & Basu (1994), Oliver (1999), Manzuma-Ndaaba <i>et al.</i> (2016), Banahene, Ahudey & Asamoah (2017)
	LOY2: I really like my company	
	LOY3: I am planning to continue to work for this employer	
	LOY4: I disseminate positive opinions about my employer	

Source: the authors.

The answers were recorded on 7-point Likert scales. We used an online survey questionnaire to get a high response rate. The sample had a purposive character. The research encompassed 419 persons working as administrative and office employees in various branches, e.g. the construction industry, the industrial production sector, education and other services. The empirical study was carried out with the use of the Google Forms platform.

The responses were analysed with the use of a method of structural equation modelling (SEM). This is a set of statistical techniques used in order to examine causal relationships between observable and latent variables (Pearl, 2000; Hair *et al.*, 2014). We used both models of SEM: the measurement model and the structural model. The measurement model deals with testing the constructs' items in order to assure that each set of items measures their corresponding construct, while the structural model proceeds by testing the influence of constructs on each other. Both proposed models were tested using Statistica 13.0 software.

4. Results

4.1. Measurement Model

As in the earlier study (Lotko, 2022), to assess the proposed model an initial step involved conducting a confirmatory factor analysis (CFA) to verify the reliability and validity of the constructs proposed within the measurement model. Values of factor loadings indicate a statistically significant relationship of the observable variables with:

1. Factor 1 is loaded by four variables measuring: the degree of contentment derived from training opportunities, personal development, pursuing passions, and non-monetary benefits with a dimension representing career development (CAR).

2. Factor 2 is loaded by eight variables describing: the satisfaction level regarding ventilation, restroom facilities, social back office, noise level, temperature, ergonomic standards of equipment, and the aesthetic aspects of the workplace. This dimension describes physical job conditions (PHY).

3. Factor 3 is loaded by three variables: the satisfaction level concerning interactions with colleagues and supervisors, as well as communication in the workplace with a factor describing interpersonal relations (IRE).

4. Factor 4 is loaded by four variables, encompassing cognitive, emotional, conative, and active dimensions of employee loyalty (LOY).

The assessment of the CFA model occurs in two stages: 1) evaluating the goodness-of-fit of the structural model and 2) assessing the convergent and discriminant validity of the measurement model. To appraise the goodness-of-fit of the CFA model, the study employed threshold values recommended by Hair *et al.* (2014) and utilised, for instance, by Alolayyan *et al.* (2020). These thresholds include χ^2/df , goodness-of-fit (GFI), root mean square error of approximation (RMSEA), Comparative Fit Index (CFI), and Tucker Lewis Index (TLI or Non-normed Fit Index, NNFI). Table 3 presents the fit indices obtained for the measurement model.

Table 3. Assessment of the Measurement Model

Obtained Fit Indices					
χ^2/df	p	GFI	RMSEA	CFI	TLI
8.23	0.00	0.80	0.14	0.91	0.91
Suggested Fit Indices					
≤ 5	≤ 0.05	≥ 0.80	≤ 0.08	≥ 0.90	≥ 0.90

Source: the authors.

To evaluate the factor structure, reliability, and discriminant validity, a collective CFA encompassing all variables was performed. The outcomes of the CFA model, as presented in Table 4, demonstrate that the measurement model results

for reflective measures exhibit a satisfactory fit, as the majority of the fit values meet the recommended cut-off scores: $p = 0.00$, GFI = 0.80, CFI = 0.91, TLI = 0.91. Nevertheless, $\chi^2/df = 8.23$ and RMSEA = 0.14 are out of the suggested range.

Table 4 displays the factor loadings (FL) and composite reliability (CR) for each construct, along with Cronbach's alpha (α) and average variance extracted (AVE), ensuring the model's reliability.

Table 4. Reliability Measures for the Measurement Model

Constructs	FL	CR	α	AVE
CAR	0.75–0.82	0.63	0.88	0.60
PHY	0.72–0.81	0.91	0.91	0.56
IRE	0.66–0.80	0.41	0.84	0.50
LOY	0.60–0.80	0.81	0.93	0.51

Source: the authors.

Moreover, for evaluating discriminant validity, both the variable correlation matrix and the square root of the AVE were utilised. The square root of AVE for each construct should adhere to the Fornell-Larcker (1981) criterion, meaning it should surpass the correlations between any two dimensions in the model. As depicted in Table 5, this criterion was successfully satisfied.

Table 5. Validity Assessment for the Measurement Model

Constructs	CAR	PHY	IRE	LOY
CAR	0.77	–	–	–
PHY	0.45*	0.75	–	–
IRE	0.62*	0.49*	0.71	–
LOY	0.71*	0.47*	0.70*	0.71

* $p < 0.001$.

Notes: The diagonal values represent the square root of the AVE, while the off-diagonal values indicate the correlations between constructs.

Source: the authors.

Additionally, convergent validity has been validated based on three criteria proposed by Fornell and Larcker (1981). Firstly, the factor loadings should equal or exceed 0.5. Secondly, for each factor AVE should exceed the value of 0.5. Finally, CR should be higher than 0.7. As shown in Tables 4 and 5, the three conditions which approve convergent validity were met, only for interpersonal relations is the value of CR below the threshold (0.41).

4.2. Structural Model

Structural and especially standardised path coefficient estimates are shown in Figure 1.

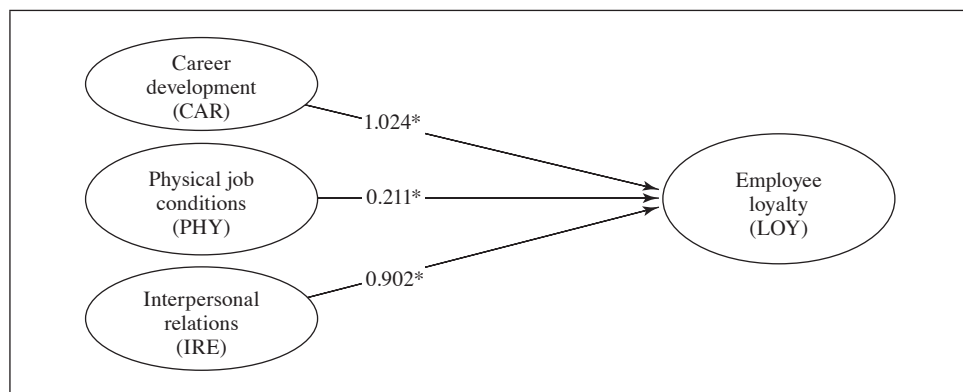


Fig. 1. Structural Model

* $p < 0.001$

Source: the authors.

Table 6 presents a summary of testing hypotheses with the use of SEM.

Table 6. Summary of SEM Results for the Proposed Model

Predictor Variables	Criterion Variable	Hypothesised Relationship	Standardised Coefficient
Career development	employee loyalty	H1 → supported	1.024*
Physical job conditions		H2 → supported	0.211*
Interpersonal relations		H3 → supported	0.902*

* $p < 0.001$.

Source: the authors.

As can be seen in Table 6, the impact of career development on employee loyalty is $\beta_1 = 1.024$ with $p < 0.001$. Hence hypothesis H1 has been verified. Furthermore, the influence of physical job conditions on employee loyalty is only $\beta_2 = 0.211$ and it is also statistically relevant. Therefore hypothesis H2 can also be confirmed. Finally interpersonal relations influence employee loyalty with $\beta_3 = 0.902$ with $p < 0.001$. In this way hypothesis H3 has been confirmed. As can be seen from Table 7, two factors have the greatest impact on employee loyalty: career development and interpersonal relations. In the case of the third factor, physical job conditions, the impact

is relatively smaller, but still significant. This leads to the statement that intangible factors are most significant for employees' employee loyalty, while physical, tangible factors have a smaller influence on loyal attitudes and behaviour.

Finally, Table 7 summarises the obtained values of indices estimating the model.

Table 7. Assessment of Overall Model Fit

Obtained Fit Indices					
χ^2/df	p	GFI	RMSEA	CFI	TLI
5.51	0.00	0.85	0.10	0.90	0.91
Suggested Fit Indices					
≤ 5	≤ 0.05	≥ 0.80	≤ 0.08	≥ 0.90	≥ 0.90

Source: the authors.

As can be seen in Table 7, in general the structural model shows an average fit. This can be seen in the values of the following indices: GFI = 0.85, $p = 0.00$, CFI = 0.90, TLI = 0.91. Again, in case of $\chi^2/df = 1.55$ and RMSEA = 0.10 the values are slightly beyond the suggested range (MacCallum, Browne & Sugawara, 1996).

5. Discussion

The meaning of job satisfaction and its impact on employee loyalty has been covered by many studies applying SEM in this area. The discussed results come from the most recent years.

The first authors (Dhir, Dutta & Ghosh, 2020) conducted a survey among Indian managerial executives. Responses have been tested using the SEM approach. They tested a model that illustrates how person-job fit, person-organisation fit and perceived supervisor support affect job satisfaction and employee loyalty. Job satisfaction turned out to be a mediator, leading to employee loyalty.

The research conducted by Phuong and Vinh (2020) enhances our comprehension of the connections between job satisfaction, employee loyalty, and job performance. Employing SEM to test hypotheses, the study data obtained from employees in Vietnamese lodging enterprises. The empirical findings revealed, among other outcomes, a positive direct influence of job satisfaction on employee loyalty.

Chen, Xu and Yao (2022) examined the assumed relationship in a high risk industry – mining. These authors investigated the relationship between employee satisfaction and employee loyalty through a survey that targeted employee loyalty, work quality, job satisfaction, and the relationship between enterprise image and switching costs. The hypotheses were tested using SEM. Employee loyalty turned out to be significantly associated with enterprise image and employee satisfaction, work quality indirectly affected loyalty through satisfaction.

Another study (Vuong *et al.*, 2021) analyses factors affecting doctors' satisfaction and loyalty from a survey of doctors working in public hospitals in Vietnam. Again, SEM was employed to test the relationship among the factors in the research model. The results indicated that employees satisfied with their job tend to be loyal to the organisation.

The other paper (Nurlaila & Nurdin, 2020) deals with examining the effect of quality of work life and job satisfaction on loyalty and its impact on employee performance. The collected data was analysed by SEM. The results show that quality of work life affects employee performance, job satisfaction affects employee performance, the quality of work life affects employee loyalty and job satisfaction affects employee loyalty. All of these causality results strengthen the previous theories.

The purpose of another study (Murtiningsih, 2020) was to analyse the effect of compensation, training and development, and organisational culture on job satisfaction and employee retention. The study used the SEM analysis to test the hypotheses. The results show that compensation, and training and development have a positive effect on job satisfaction. Furthermore, job satisfaction has a positive impact on employee retention.

In a subsequent paper, Farrukh, Kalimuthuan and Farrukh (2019) examined how job satisfaction, trust, and leadership support affect employee loyalty within the hotel industry in Saudi Arabia. The researchers gathered data through a structured questionnaire and employed SEM to test their hypotheses. The findings of this study also suggest that factors related to job satisfaction have an impact on employee loyalty.

In an interesting study (Wahyuningrat & Rusmawan, 2022), the authors attempted to determine the influence of different factors on employee loyalty. To achieve this, senior public health centre employees were analysed. Data analysis used SEM method. The results of hypothesis testing show that all of the considered constructs: 1) leadership, 2) work culture, 3) work environment, 4) interpersonal communication, and 5) workload have a positive effect on loyalty.

The results obtained by Waqas *et al.* (2014) reveal that there is a positive and strong relationship between job satisfaction and loyalty. These authors explained that the factors that influence job satisfaction in the strongest manner are appreciation and recognition, workplace environment and empowerment.

In summary, it can be claimed that all of the analysed studies confirm the existence of a positive and statistically significant impact of different dimensions of job satisfaction on employee loyalty, so they are in concordance with the findings of our study.

6. Conclusions

Today human resources management (HRM) seems especially difficult because employees are highly qualified and aware of their rights while working in an organisation. Therefore, it is imperative that organisations identify the needs of their employees and satisfy them to ensure effective accomplishment of its goals and objectives (Raziq & Maulabakhsh, 2015). The presented study provides an approach for designing HRM policy, as it explains the impact of various factors on employee loyalty. These results could help understand various underlying factors contributing to job satisfaction and employee loyalty. They are as follows:

1. Using SEM it was shown that the impact on loyalty to the employer of each of the identified three dimensions of job satisfaction is positive and statistically significant.

2. In detail, employee loyalty is impacted in highest degree by career development (1.024), and then interpersonal relations (0.902), while physical job conditions (0.211) had the smallest impact.

3. The obtained model fit can be recognised as average.

4. The obtained results find strong confirmation in literature.

The results of the study deliver knowledge on the important role of job satisfaction, first of all derived from intangible aspects, in building employee loyalty. Developing these aspects can be a good tool for designing HRM policy, as it can influence employees' attitudes and behaviour towards the organisation.

7. Managerial Implications

Employees are a determining factor for every effective organisation. This is because efforts to fulfil the organisation's mission are determined by the quality of human resources (Darmawan *et al.*, 2020). Therefore, organisations must carry out the management and development of human resources in a professional and planned manner. They need to pay attention to ensuring that the employees are satisfied (Earl *et al.*, 2011; Turkyilmaz *et al.*, 2011) and how employees build loyalty towards organisations (Ibrahim & Al Falasi, 2014; Darmawan *et al.*, 2020). As suggested in many studies, employee loyalty can enhance efficiency, improve business outcomes, foster business growth, and reduce employee turnover (Meyer & Allen, 1997; Antoncic & Hisrich, 2004). Additionally, loyal employees play a role in shaping the company's image within its environment and among external stakeholders, including customers (Antoncic & Antoncic, 2011).

In our study it turned out that in the case of all three dimensions of job satisfaction, the influence on employee loyalty was found to be statistically significant. Considering the standardised path coefficients obtained, it is noteworthy that intangible factors (career development and interpersonal relations) impact employee

loyalty to a far more substantial degree than work environment. The fact that organisations should be aware of the importance of intangible factors is also confirmed by other researchers (Ineson, Benke & László, 2013). This observation leads to the following implications concerning the impact of the three dimensions of job satisfaction on employee loyalty:

1. Career development. Constant development of skills is a must for contemporary workers. Career development is the main imperative to retain employees and is perceived as one of the key attractors to organisation (Kreisman, 2002). Then Abdullah *et al.* (2009) confirmed that opportunity for career development has increased the tendency of employees to become loyal to the organisation. It implies that the employees feel they have a future with the organisation. Because of this, good, sound career development advice should be offered to valued employees. Additionally, a clearly defined career structure should be introduced. Staff development programmes should be offered especially to promising workers with longer experience with the organisation (Ineson, Benke & László, 2013). Popular managerial tools used in career development are SWOT analysis, career testing, self-assessment, personality tests, competency guides, career planning resources, and mentoring.

2. Personal relations. They refer to a strong association among individuals working together. Employees working together should share a special bond for them to deliver their level best (Obakpolo, 2015). Valued interpersonal relationships can influence organisational outcomes by increasing institutional participation, establishing supportive and innovative climates, increasing organisational productivity and reducing staff turnover (Berman, West & Richter, 2002; Song & Olshfski, 2008). Petterson and Arnetz (1998) suggest that attaining the goals of an organisation depends much on the understanding between employees and supervisors, whereas effective communication plays a vital role in running the organisation. The basic management concepts concerning interpersonal relations in organisations encompass components such as communication, trust, care, participative leadership, shared goals and values, mutual trust, mutual respect, understanding motivation, and conflict management (Obakpolo, 2015; Brhane & Zewdie, 2018). To improve in this area, the following should be considered: cultivating a positive outlook, acknowledging the expertise of others, showing real interest in others, practicing empathy (Petterson & Arnetz, 1998).

3. Physical working conditions. This is the third factor, having a smaller, but still significant, influence on loyalty. The positive effects of a good work environment for both individual health and corporate success has been discussed in many reviews (Shain & Kramer, 2004; Dul & Ceylan, 2011). Examples of reported effects are both health and business related, like better employee health and welfare, less sick leave and accidents, increased productivity, creativity, and lower staff turnover.

The researchers believe physical conditions, including lighting, noise, and microclimate, impact well-being and potential health issues even in administrative and office settings (Aleksandrova, 2005; Katz, 2017). Enhancing these factors aims to adjust their parameters in a way that ensures ergonomic working conditions, preventing dysfunction in the human organism and, consequently, maintaining or improving the quality and efficiency of work (Niciejewska & Kač, 2019). Managing specific elements of the work environment is essential for achieving better working conditions overall (Costa-Font & Ljunge, 2018).

We believe that managerial implications of this study can be useful for a better understanding of HRM in the area of employee satisfaction and allows it to be linked with employee loyalty, with positive effects for both individual and organisational success.

8. Limitations and Further Research

Although the research was conducted in different industries, one should remember that only administration and office workers were surveyed. This is a limitation, as it affects the differentiation of the sample. Also the geographical range of the research was restricted to the Mazowieckie voivodeship. The authors' questionnaire used in the research contained a limited number of observable variables – 15 items for job satisfaction and 4 for employee loyalty. It should be borne in mind that in some other research tools the number of variables is significantly larger, e.g. the Job Descriptive Index – 72 items (Smith, Kendall & Hulin, 1969), the Job Satisfaction Survey – 36 items (Spector, 1985). These limitations suggest ways to further improve the research.

The following can be listed as directions for further research: 1) increasing the number of observable variables in the questionnaire, as well as increasing the number of assumed dimensions constituting the job satisfaction construct, 2) introducing the variables intervening between job satisfaction and employee loyalty, e.g. commitment (Andrew, 2017), 3) widening the geographical scope of the research, and also including employees in different jobs, and 4) examining and discovering the impact of employee loyalty on modern organisational performance, aimed at reaching their goals under conditions of constant change (Chanda & Goyal, 2020).

Authors' Contribution

The authors' individual contribution is as follows: Aleksander Lotko 40%, Małgorzata Lotko 30%, Stanisław Popek 10%, Grzegorz Szalas 10%, Adam Popek 10%.

Conflict of Interest

The authors declare no conflict of interest.

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