Significant Predictors of Employees’ Motivation and Employees’ Job Satisfaction

**Ljiljan Veselinovic**

*School of Economics and Business in Sarajevo, Sarajevo, Bosnia and Herzegovina*

ljiljan.veselinovic@efsa.unsa.ba

**Zijada Rahimic**

*School of Economics and Business in Sarajevo, Sarajevo, Bosnia and Herzegovina*

[zijada.rahimic@efsa.unsa.ba](mailto:cihatcetin@gmail.com)

**Abstract**

As Henry Ford noted in his autobiography “business […] is not a machine. It is a collection of people who are brought together to do work.” In existing literature it is evident that soft approach of human resources is predominant since researches are more focusing on workers’ satisfaction of the job and different aspects of job satisfactions in various businesses’ environment rather than treating workers the same way as other resources are treated (hard approach). However, job satisfaction is a multi-faceted construct. The most conventional aspects of satisfaction are: satisfaction with pay, promotion opportunities, coworkers, supervision, and the work itself. Some researches examine model where passion and organizational commitment are important predictor of job satisfaction.

The purpose of this research is to identify factor structures associated with Minnesota Satisfaction Questionnaire, Organizational Commitment Questionnaire and Worker Motivation Questionnaire and to develop regression model that will be able to predict level of motivation (measured in hours) and workers satisfaction on the sample from Bosnia and Herzegovina.

An online questionnaire was distributed to individuals by e-mail (Google Survey Tool). A total of 63 surveys were obtained and analyzed. Data screening, assumption testing and sampling adequacy was done according to Field (2005). All relevant tests (such as KMO) provide sufficient information to confirm that factor analysis is the appropriate technique for the sample.

First regression model shows that passion affect motivation level (measured in hours) and it accounts for 47% in the variance of the hours people are motivated. However, other two independent variables (extrinsic and intrinsic motivation instruments) do not improve significantly model. Another model emerged from the collected data. Organizational commitment (both continuance and affective) seems to be a good predictor of extrinsic satisfaction of the workers. Implication of this is: if managers want to improve workers’ satisfaction of the working environment, they should arouse workers emotions toward organization (affective commitment) and should increase costs of leaving the organization (continuance commitment). Further researches should be focused on discovering factors that could predict motivation level in Bosnian-Herzegovinian environment. As it is already confirmed (in the literature as well as by this research), salary is not an important predictor of worker motivation and satisfaction. While passion seems to be the most important predictor of motivation, it is questionable what facets of passion are and how to measure them properly.

**Keywords:** job satisfaction,organization commitment, employees’ motivation, regression model, Bosnia and Herzegovina

**Introduction**

The purpose of this research is to identify factor structures associated with Minnesota Satisfaction Questionnaire (MSQ), Organizational Commitment Questionnaire (OCQ) and Worker Motivation Questionnaire (WMQ) and to develop regression model that will be able to predict level of motivation (measured in hours) and workers satisfaction on the sample from Bosnia and Herzegovina. Literature review is provided in the first section and subsequently detail explanation of methodology, data structure and results. In the last section of this paper conclusion, limitations and further research suggestion are given.

This paper aims to contribute to better understanding of different facets of job satisfaction, organizational commitment and worker motivation. This paper also examines relationship between these different constructs. From practical perspective, different organizational climate influences productivity, innovation and employee satisfaction (Rahimić, 2013). Therefore, studying previously mentioned constructs are even more required in order to define organizational guiding principles for local managers.

**Literature Review**

Henry Ford noted in his autobiography that “business […] is not a machine. It is a collection of people who are brought together to do work.” (Ford 2008, p.65). In Human Resource Management theory, there are two approaches to managing people (Rahimić 2010, p.20): (1) soft approach and (2) hard approach. Main difference between these two approaches is the way workers are treated, i.e. the same as other resources (hard approach) or workers are the most important part of the business (soft approach). However, it seems that soft approach is predominant in existing literature since researches are more focusing on workers’ satisfaction of the job and different aspects of job satisfactions in various businesses’ environment (Ali Shaikh, Buttho and Maitlo 2012; Westover 2012; Sharma and Bajpai 2011; Ferguson and Cheek 2011; Rogelberg, Allen, Shanock, Scott, Shufflerwang 2010; Wang, Tiksin, Chiang, Huang 2010).

Job satisfaction is a multi-faceted construct (Rogelberg et al. 2010, p.150). The most conventional aspects of satisfaction are: satisfaction with pay, promotion opportunities, coworkers, supervision, and the work itself (Rogelberg et al. 2010, p.150). In the recent research by Amabile and Kramer (2010)progress was identified as the most important factors of the employees’ workdays, i.e. making headway in doing jobs was bringing significant satisfaction to the employees and motivates them to work even harder. According to this research collaboration, instrumental support, interpersonal support and having important work are other aspects of the workplace that motivates people to work harder and to feel satisfied.

Job satisfaction is defined as “…the state in which employees feel the situation of pleasure from his or her job or it is the positive and emotional state of the employee as a result of the appraisal of his or her job and performance” (Ali Shaikh et al. 2012, p.322). Different concepts that are used in existing literature, such as workplace learning, organizational commitment, and workplace performance are related to the job satisfaction. Jang et al. (2010) discuss relationship between these constructs: workplace learning improves workers’ skills and abilities and this in turn enhances job satisfaction and job commitment; job satisfaction improves organizational commitment; while organizational commitment can improve workplace performances. All those constructs lead to higher workers’ productivity. Research conducted by Malhotra et al (2004) indicates that organizational commitment and job satisfaction influence service quality of customer-contact employees in backing call centers.

Job satisfaction is “… one of the most commonly researched topics across both management and psychological disciplines with several hundred refereed, published articles in the last decade alone.” (Ferguson and Cheek 2011, p.222). Job satisfaction as a concept could be ignored neither from theoretical perspective nor from practical. From theoretical perspective, there are many different facets of job satisfaction that should be analyzed, while from the practical perspective people spend more time at the workplace than at any other so understanding these facets will help manager in better managing people.

Five job facets (satisfaction with pay, promotion opportunities, coworkers, supervision, and the work itself) usually “… account for a substantial amount of the variance in overall job satisfaction.” (Rogelberg et al. 2010, p.150). However, Westover et al. (2010) examine model where passion and organizational commitment are important predictor of job satisfaction. Many others models are developed to predict job satisfaction as well. However, specific working environments and different cultural values require testing these models in order to prove its general purpose.

**Research Design and Methods**

The purpose of this research is to identify factor structures associated with Minnesota Satisfaction Questionnaire (MSQ), Organizational Commitment Questionnaire (OCQ) and Worker Motivation Questionnaire (WMQ) and to develop regression model that will be able to predict level of motivation (measured in hours) and workers satisfaction on the sample from Bosnia and Herzegovina.

Data was collected by questionnaire based on existing literature. Questionnaire is consisted of following five sections:

1. General information about respondents (age, education, gender, their general satisfaction level).
2. MSQ developed by Weis, England, Dawis and Lofquist (20 questions)
3. OCQ developed by Modwday, Porter and Steers (15 questions)
4. Worker motivation and satisfaction on one particular day. Respondent were asked to choose one particular day, to write what happened on that day, and then to estimate different aspects of job satisfaction and motivation instruments that occurred on that particular day.
5. Average salary (this was the last question showed at separate page with clear information that they are not oblige to answer it; however 43 respondents out of 63 answer to this question as well)

MSQ was developed by Weiss, Daswis, England and Lofquist (Wang et al., 2010) and is based on five-point Likert scale. It comes in 100-item long form and a 20-item short form. In general, MSQ is covering almost 20 aspects of job satisfaction, such as “… activity, independence, variety, social status, supervision and moral values.” (Wang et al. 2010, pp.151). Organizational commitment questionnaire (OCQ) was used since it affects job satisfaction the most, according to researches of Westover et al. (2010). Again, five-point Likert scale was used.

In order to predict job satisfaction and worker motivation, respondents were asked to think of one particular day. Although, this question was not indented to be used in data analysis it is important to collect other data: respondents would be focused on that particular day, and their answers would reflect their reality since they would be forced to think of that day. Respondents were asked to estimate their motivation level, passion level and tasks completed that particular day in percentage (from 0 to 100). Many other facets of workplace that affects job satisfaction and worker motivation were measured on five-point Likert scale.

All statistical procedure will be done according to suggestion of Field (2005) and Hair et al. (2010). Variables that are collected from the questionnaire are shown in Table 1.

Table 1: Variables defined in the questionnaire

|  |  |
| --- | --- |
| Variable | Description and measure |
| AGE | Number of years |
| GENDER | Male or female |
| WORKING\_HOURS\_DAY | Working hours during the week |
| WORKING\_DAYS\_PER\_WEEK | Number of working days per week |
| DO\_YOU\_LIKE\_YOUR\_WORK | Yes or No |
| SATISFACTION\_LEVEL | General satisfaction level of current work (Ten-point Likert scale) |
| RESOURCES\_AVAILABLE | Are all required resources available to you? (Ten-point Likert scale) |
| MSQ\_Q1, MSQ\_Q2, […], MSQ\_Q20 | Minnesota Satisfaction Questionnaire [20 questions]  (Five-point Likert scale) |
| OCQ\_Q1, OCQ\_Q2, […], OCQ\_Q15 | Organizational Commitment Questionnaire [15 questions] (Five-point Likert scale) |
| TASK\_DESCRIPTION | Description of one particular day [text/ memo] |
| RM\_MOTIVATION\_LEVEL | Estimation of general motivation level at that particular day (in hours) |
| PASSION | How passionate they were in doing that job at that particular day  (as percentage) |
| TASK\_COMPLETED | How much of the work was done at that particular day? (as percentage) |
| RM\_Q1, RM\_Q2, […], RM\_Q8 | Question regarding causes of worker motivation that occurred at that particular date [8 questions] (Five-point Liker scale) |
| SALARY | Their monthly income (average salary) |

**\*Note:** Description of MSQ\_Q1, MSQ\_Q2, OCQ\_Q1 etc. are provided in exploratory factor analysis’ section

Basic descriptive statistics and correlation matrices were used to analyze data. Exploratory factor analyses were used to identify factor structure among question from MSQ, OCQ and WMQ. This method will be employed to find common factors from the three sections, so average scores of the factors will be used. In order to predict job satisfaction and worker motivation, multiple regressions will be used.

**Data Collection**

An online questionnaire was distributed to individuals by e-mail (Google Survey Tool). A total of 63 surveys were obtained and analyzed out of 312 that were distributed, which represents response rate of 20%. Female represents 57.1% of the sample, while male 42.9%. All respondents aged between 20 and 40 years.

Salary and text description of one particular day were not required to fill. However, total of 46 respondents provided information regarding their salaries, and almost everyone provided textual description of one particular day. Descriptive statistics regarding age, salary and average working hours are shown in table 2.

Table 2: Descriptive statistics – age, salary and average working hours per day

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | N | Minimum | Maximum | Mean | Std. Deviation |
| Age | 63 | 20 | 40 | 28.56 | 4.450 |
| Average salary (BAM) | 46 | 200 | 4000 | 1397.55 | 773.325 |
| Average working hours per day | 63 | 5 | 18 | 8.74 | 1.962 |

Seventeen surveys had missing values in one variable (salary) since it was not obligate to answer. This lack of data certainly limits the results of regression analysis. However, it did not affect exploratory factor analysis for MSQ, OCQ and MWQ since all other questions were obligate to answer via web online survey. Data for salary that was collected does not predict motivation level and is accounted for 6.9% of the total variance in the motivation level (when salary is independent variable and motivation level is dependent variable), so it was not used. Variable RM\_MOTIVATION\_LEVEL had 4 missing values because question was misunderstood by respondents (instead of writing number of hours, respondents wrote day of the week). The problem also appeared in expressing the motivation level as percentage since some respondents use scale from 0 to 1, while other from 0 to 100 (although 0 to 100 was specified). All those issues were corrected. There were four outliers detected in the research (case number 8, 43, 56 and 61). Rules for elimination of case was based on standardized residual and if standardized residual is less than -2 or greater than 2 cases were eliminated (number of such outliers was at acceptable level and was less than 7%).

Power of regression model is estimated to be 100% (R2 is 0.725; number of predictors 3; sample size 63 and probability level of 0.05).

**Data Analysis**

Before running exploratory factor analysis, data screening, assumption testing and sampling adequacy was checked. Preliminary analysis suggested by Field (2005) was followed. All 20 variables from MSQ correlate fairly well except variables MSQ\_Q9 and MSQ\_Q1. One-tailed significance of Pearson correlation coefficient between variable MSQ\_Q5, MSQ\_Q8, MSQ\_Q18 and all other pairs of variable were not significant. Therefore, these five variables were excluded from the analysis. Variables OCQ\_Q4, OCQ\_7 and OCQ\_13 in OCQ did not have one-tailed significance of Pearson correlation coefficient below 0.05, while variable OCQ\_Q3 did not correlate to any other. All variables in MWQ correlate fairly well and one-tailed significance of Pearson correlation coefficient were below 0.05.

After elimination of five variables from MSQ, the determinant was greater than the value of 0.0001, so multicollinearity is not a problem of these data anymore. The values of determinants above 0.0001 have been calculated for MWQ as well as for the OCQ after reduction of variables.

Other preliminary analysis includes KMO statistics, Bartlett’s test of sphericity and anti-image matrices analysis. KMO value for MSQ was 0.867, so exploratory factor analysis is appropriate technique for these data. All diagonal elements of anti-image matrices had KMO values greater than 0.5. Bartlett’s test is highly significant (p<0.001). KMO values for OCQ and MWQ were also higher than minimum required. Table 3 shows summaries of the KMO statistics and Bartlett’s test of sphericity for the MSQ, OCQ and MWQ data.

Table 3: KMO and Bartlett's Test

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | | MSQ | OCQ | WMQ |
| Kaiser-Meyer-Olkin Measure of Sampling Adequacy. | | .867 | .860 | .752 |
| Bartlett's Test of Sphericity | Approx. Chi-Square | 531.952 | 486.835 | 355.747 |
| Df | 105 | 55 | 28 |
| Sig. | .000 | .000 | .000 |

Most of the communalities exceed 0.7, while average communality for the MSQ is 0.66. Residuals are computed between observed and reproduced correlations. There are 53 (50.0%) nonredundant residuals with absolute values greater than 0.05. Since this value is not higher than 50%, so no grounds for concern.

The number of extracted factors in MSQ was three (Table 4). Cronbach’s α for each subscale of MSQ is around acceptable level, which indicates good reliability. Those three factors accounted for 65.19% of explained variance.

First factor is concerned with extrinsic satisfaction. Extrinsic satisfaction refers to the situations when employees consider only the conditions of work (coworkers, pay etc), ie. Satisfaction that comes from outside an individual (for example praise received for doing good job). Factors 2 and 3 are concerned with different aspects of intrinsic satisfaction which comes from inside an individual (employees consider the task that make up the job, job type etc.). Factor 2 is concerned with relationship between one particular employee and others, while factor 3 is more concerned with giving employee certain level of freedom.

Table 4: Rotated Component Matrix(a. Rotation converged in 6 iterations) for MSQ

|  |  |  |  |
| --- | --- | --- | --- |
|  | Component | | |
| Extrinsic satisfaction (1) | Intrinsic satisfaction: relationship (2) | Intrinsic satisfaction: level of freedom (3) |
| [19. praise I get for doing a good job] | .893 |  |  |
| [20. feeling of accomplishment I get from job] | .827 |  |  |
| [12. the way company policies are put into practice] | .810 |  |  |
| [13. my pay and the amount of work I do] | .716 |  |  |
| [6. the competence of my supervisor in making decisions] | .651 |  |  |
| [17. working conditions] | .646 |  |  |
| [14. the chances for advancement on this job] | .574 |  |  |
| [10. the chance to tell other people what to do] |  | .763 |  |
| [8. my job provides for steady employment] |  | .689 |  |
| [4. the chance to be somebody in community] |  | .660 |  |
| [3. the chance to do different things from time to time] |  | .608 |  |
| [11. do something that makes use of my abilities] |  | .600 |  |
| [16. try my own methods of doing the job] |  |  | .859 |
| [15. freedom to use my own judgment] |  |  | .833 |
| [2. the chance to work alone] |  |  | .635 |
| Share of variance explained (%) | 28.329 | 47.536 | 65.194 |
| Cronbach's Alpha | .894 | .818 | .846 |
| Cronbach's Alpha Based on Standardized Items | .894 | .820 | .844 |
| No of Items | 7 | 5 | 3 |
| Extraction Method: Principal Component Analysis.  Rotation Method: Varimax with Kaiser Normalization. | | | |

While in Taiwan and BH same, elements of factor 1 (extrinsic satisfaction) are the same and more important than factor 2 (intrinsic satisfaction). In the US sample, intrinsic satisfaction was more important than extrinsic satisfaction. Comparison between US, Taiwan and BH sample is shown in Table 5.

Table 5: Comparison of factor structures of US, Taiwan and BH sample

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Sample | Factor 1 | Factor 2 | Factor 3 | Factor 4 | Factor 5 |
| BH | 19, 20, 12, 13, 6, 17, 14 | 10, 8, 4, 3, 11 | 16, 15, 2 |  |  |
| Taiwan | 12, 13, 6, 17, 5, 20 | 2, 11, 10, 1, 16, 15 | 4, 3, 14 | 19, 18 | 7, 8, 9 |
| US | 1, 2, 3, 4, 7, 8, 9, 10, 11, 15, 16, 20 | 5, 6, 12, 13, 14, 19 | 17, 18 |  |  |

**Explanation:** Factor 1 in BH sample is represented with red color, factor two with blue color and factor 3 with orange color.Variables identified in the Taiwan and US researched are showed in the second and third row, while colors of the factors from the BH sampled remained across the table. As it can be seen, most of the elements that belongs to factor 1 in BH sample, belongs to factor 1 in Taiwan sample, but to factor 2 in US sample.

The numbers of extracted factors in OCQ questionnaire is two (Table 6). Wang et al. (2010) borrowed typology from Meyer and Allen (1997), so the same typology was used here. Therefore, factor 1 is concerned with continuance commitment (employees are aware of the costs associated with leaving the organization). Factor 2 explains affective commitment (emotions and attitudes towards organization). Cronbach’s α for each subscale of OCQ is around acceptable level, which indicates good reliability.

Table 6: Rotated Component Matrix(Rotation converged in 3 iterations) for OCQ

|  |  |  |
| --- | --- | --- |
|  | Component | |
| Continuance commitment (1) | Affective commitment (2) |
| [11.not much gained by sticking with this org (R)] | .902 |  |
| [9.little change cause me to leave (R)] | .884 |  |
| [15.mistake on my part working for this org (R)] | .757 |  |
| [10.glad choosing this organization to work for.] | -.692 |  |
| [12.difficult to agree with the policies relating to employees (R)] | .641 |  |
| [8.inspire the very best in me in way of job performance] | -.603 |  |
| [14.best of all possible org to work] |  | .775 |
| [1.putting great deal of effort to help this organization] |  | .769 |
| [2.great organization to work for] |  | .745 |
| [6.proud to tell that I am part of this organization] |  | .745 |
| [5.my and the organization’s values are similar] |  | .670 |
| Share of variance explained (%) | 36.675 | 69.116 |
| Cronbach's Alpha | .770 | .741 |
| Cronbach's Alpha Based on Standardized Items | .772 | .743 |
| No of Items | 6 | 5 |
| Extraction Method: Principal Component Analysis.  Rotation Method: Varimax with Kaiser Normalization. | | |

MWQ revealed two kinds of instruments that happened at one particular day workers selected (Table 7): intrinsic motivation instruments (factor 1) and extrinsic motivation instruments (factor 2). Cronbach’s α for each subscale of MWQ is around acceptable level, which indicates good reliability (see appendices)

Table 7: Rotated Component Matrix (Rotation converged in 3 iterations) for MWQ

|  |  |  |
| --- | --- | --- |
|  | Component | |
| Intrinsic motivation instruments (1) | Extrinsic motivation instruments (2) |
| [3. The goals were clear and I know what I was supposed to do] | .920 |  |
| [1. That particular day I had a feeling I was making progress, ie. I was busy all day] | .865 |  |
| [2. I was excited about work that day. I believed I could finish the work that was required.] | .835 |  |
| [4. Deadlines were clearly defined and I had enough time to finish my work] | .834 |  |
| [7. That day I made an excellent collaboration with our colleagues, who helped me (and often do) to overcome obstacles] |  | .858 |
| [8. My colleagues were very accessible to, friendly and helpful] |  | .815 |
| [5. I got recognition for my work doing that particular day] |  | .810 |
| [6. I received a monetary incentives on that day] |  | .725 |
| Share of variance explained (%) | 39.129 | 74.114 |
| Cronbach's Alpha | .908 | .837 |
| Cronbach's Alpha Based on Standardized Items | .912 | .843 |
| No of Items | 4 | 4 |
| Extraction Method: Principal Component Analysis.  Rotation Method: Varimax with Kaiser Normalization. | | |

Initial regression model (Figure 1) was that motivation level (measured in hours at one particular day) will depend on passion and many different instruments. WMQ factor analysis revealed that there are two groups of motivation instruments: intrinsic and extrinsic. So, following regression model was specified.

Figure 1: Regression model 1

**Dependent variable**

Motivation level (RM\_MOTIVATION\_LEVEL)

**Independent variable 1**

Passion (PASSION)

**Independent variable 2**

Intrinsic motivation instruments (WMQ\_FACTOR1)

**Independent variable 3**

Extrinsic motivation instruments (WMQ\_FACTOR2)

However, only passion is significant predictors of motivation level, as it was already suggested by Westover et al. (2010). Passion alone could explain 47% of the variance in the motivation level. Other two independent variables (intrinsic and extrinsic motivation instruments) do not improve model considerably (change of R2 is 0.01 and 0.02 when WMQ\_FACTOR1 and WMQ\_FACTOR2 are introduced, respectively). Assumption of independent errors is tenable (Durbin-Watson statistic is close to 2). Multicollinearity is no problem, which can be seen from correlation matrix as well (no Pearson coefficient is above 0.9). However, assumption of homoscedasticity is not met. VIF statistics also shows that there is no multicollinearity, however tolerance statistics is below 0.1 which indicates a serious problem. Therefore, this model will not be analyzed further.

Table 8: Model Summaryd

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate | Change Statistics | | | | | Durbin-Watson | |
| R Square Change | F Change | df1 | df2 | Sig. F Change | |  | |
| 1 | .690a | .477 | .468 | 1.995 | .477 | 51.940 | 1 | 57 | .000 | |  | |
| 2 | .693b | .480 | .461 | 2.007 | .003 | .344 | 1 | 56 | .560 | |  | |
| 3 | .693c | .481 | .452 | 2.024 | .001 | .073 | 1 | 55 | .788 | | 2.110 | |
| a. Predictors: (Constant), PASSION; b. Predictors: (Constant), PASSION, RM\_FACTOR1; c. Predictors: (Constant), PASSION, RM\_FACTOR1, RM\_FACTOR2; d. Dependent Variable: RM\_MOTIVATION\_LEVEL | | | | | | | | | | | |

After collected data has been study in more details, following (new) model was established: Workers’ satisfaction of the working environment could be predicted if we increase intrinsic satisfaction, workers emotions toward organization (affective commitment) and costs of leaving the organization (continuance commitment).

Figure 2: Regression model specifications

**Dependent variable**

Extrinsic satisfaction (MSQ\_FACTOR 1)

**Independent variable 1**

Intrinsic satisfaction (MSQ\_FACTOR 2)

**Independent variable 2**

Affective commitment (OCQ\_FACTOR 2)

**Independent variable 3**

Continuance commitment (OCQ\_FACTOR 1)

This model was specified in order to predict level of extrinsic satisfaction of the job (i.e. satisfaction when workers consider only the conditions of work). Extrinsic satisfaction is an average value of the variables that belongs to MSQ Factor 1 (19, 20, 12, 13, 6, 17 and 14). Independent variables are: intrinsic satisfaction, affective commitment and continuance commitment. Intrinsic satisfaction means that workers consider only the type of work they do or the tasks that make up the job (measured by average value of the variables that belongs to MCQ Factor 2 – variables 10, 8, 4, 3, 11). Affective commitment represents attitudes that employees show towards organization (measured by average value of the variables that belongs to OCQ Factor 2 – variables 14, 1, 2, 6, 5). Continuance commitment explains employees’ awareness of the costs associated with leaving the organization (measured by average value of the variables that belongs to OCQ Factor 2 – variables 1, 9, 15, 10, 12, 8).

All assumptions are met (variable types are quantitative; non-zero variance; no perfect multicollinearity; homoscedasticity; Durbin-Watson test of independent errors).

Table 7: Model Summary

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Model | R | R  Square | Adjusted R Square | Std. Error of the Estimate | Change Statistics | | | | | Durbin-Watson |
| R Square Change | F Change | df1 | df2 | Sig. F Change |
| 1 | .598a | .357 | .347 | .73370 | .357 | 33.887 | 1 | 61 | .000 |  |
| 2 | .798b | .637 | .625 | .55590 | .280 | 46.260 | 1 | 60 | .000 |  |
| 3 | .852c | .725 | .712 | .48752 | .088 | 19.012 | 1 | 59 | .000 | 2.096 |
| a. Predictors: (Constant), MSQ\_FACTOR2; b. Predictors: (Constant), MSQ\_FACTOR2, OCQ\_FACTOR2;  c. Predictors: (Constant), MSQ\_FACTOR2, OCQ\_FACTOR2, OCQ\_FACTOR1; d. Dependent Variable: MSQ\_FACTOR1 | | | | | | | | | | |

Intrinsic satisfaction accounts for 35.7% of the variance in extrinsic satisfaction. Affective commitment and intrinsic satisfaction account for 63.7% of the variance in extrinsic satisfaction. Finally, continuance commitment, affective commitment and intrinsic satisfaction account for 72.5% of the variance in extrinsic satisfaction. Adjuster R2 does not change radically so if the sample was derived from the population from which the sample was taken, independent variables would account for almost the same percentage of variance in extrinsic satisfaction.

**Conclusions, Limitations and Further Research Suggestion**

Minnesota Satisfaction Questionnaire analyses different aspects of the job satisfaction. However, two factors could be identified: intrinsic and extrinsic satisfaction. Exploratory factor analysis conducted in the US and Taiwan has similar factor structure, but it seems that BH sample structure is more similar to Taiwan than US sample. Organization Commitment Questionnaire discovered two factors: continuance and affective commitment. Worker Motivation Questionnaire discovered two kinds of instruments to improve motivation during day: intrinsic and extrinsic.

First regression model shows that passion affect motivation level (measured in hours) and it accounts for 47% in the variance of the hours people are motivated. However, other two independent variables (extrinsic and intrinsic motivation instruments) do not improve significantly model and the model does not meet multiple regression assumptions. Therefore, it was not analyzed. However, another model emerged from the collected data. Intrinsic satisfaction, and organizational commitment (both continuance and affective) seems to be a good predictor of extrinsic satisfaction. Managerial implication of this is: if managers want to improve workers’ satisfaction of the working environment, they should increase intrinsic satisfaction, as well as workers emotions toward organization (affective commitment) and should increase costs of leaving the organization (continuance commitment).

At shallow view at the data collected could derive conclusion that sample size could be limitation to this research. However, all relevant tests provide sufficient information to confirm that factor analysis is the appropriate technique. According to some researches (Field, 2005, p.640; Guagagnoli and Velicer, 1988) factor with four or more loadings greater than 0.6 is reliable which was the case in this research. Some argues that overall KMO greater than 0.7 is good enough to use exploratory factor analysis. While there is no doubt that data for factor analysis was collected properly (Likert scale), precision of data for regression data for the first model could be improved by conducting in-depth interviews.

Further researches should be focused on discovering factors that could predict motivation level in Bosnian-Herzegovinian environment. As it is already confirmed (in the literature as well as by this research), salary is not an important predictor of worker motivation and satisfaction. While passion seems to be the most important predictor of motivation, it is questionable what facets of passion are and how to measure them properly.

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