

## **CORRELATION BETWEEN EMOTIONAL INTELLIGENCE AND INTUITIVE DECISION-MAKING STYLE AMONG TOP AND MIDDLE-LEVEL MANAGERS IN SLOVENIAN AUTOMOTIVE INDUSTRY<sup>7</sup>**

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### **Abstract**

A high level of dynamics in automotive industry requires a high level of skills from its managers to deal with the surprising and unexpected new challenges. According to the testimony of scientific evidence through the use of intuition and in time limited resources, decision-making can improve the time needed to solve them, as well as improve the quality of decisions. The main purpose of the study is to identify possible correlation between level of emotional intelligence and intuitive decision-making among top and middle-level managers in Slovenian automotive industry. The study included 150 managers in Slovenian automotive industry. The data was collected by using two questionnaires. The first questionnaire was used in order to determine emotional intelligence (SSEIT questionnaire) and the second questionnaire was used to identify decision-making style (GDMS questionnaire) among researched managers. Statistical analysis was carried out using SPSS for Windows 17.0, which showed high correlation between level of emotional intelligence and intuitive decision-making style among top and middle-level managers in Slovenian automotive industry.

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**JEL:** C12, C15, M12.

## 1 Introduction

The automotive industry is an industry with a long tradition, high economic power and influence. This is one of the world's major industries, which has a significant impact on the overall national economy of the country in which it is directly or indirectly present. It covers enormous material, energy, scientific development, service, and human resources.

Technological development and innovation are the main power factors of success in the automotive industry. This applies to the development, new markets penetration, as well as continuous adaptation of organizations and competencies of their staff. Competencies which individuals acquire through regular schooling are usually no longer sufficient and need to adapt a rapid change and growing need for innovation and creativity trend of automotive industry. This is the need to identify the key characteristics of successful individuals in the automotive industry that are becoming increasingly important. Rational decision-making as the dominant mode of management has a long tradition of theories of management and operations (Hitt, Black and Porter, 2005) but in the last decade the interest in intuition as an effective way to manage has been increasingly growing (Robbins, 2005). Exploring intuition began in the mid-eighties. This period, primarily in the United States caused a large number of studies whose findings showed that the tangible value of intuition in modern organizations, as well as the existence of the fact that in certain areas and at all levels of management, this capability is becoming a prerequisite of existence (Jelovac, 2009). During studying and researching the phenomenon of intuition in modern management some new dimensions of intuition appeared and practical application of the latter is increasingly gaining ground. Under the managerial core competencies Weick and Sutcliffe (Weick and Sutcliffe, 2001) also involves the capacity to cope with the surprising and unexpected new challenges, which can according to the testimony of scientific evidence through the use of intuition in time of limited resources, decision-making, improve the time needed to solve them, as well as improve the quality of the decision. A study of managers in small and medium-sized enterprises, has proved the existence of a high degree of correlation between the managers with an intuitive style of decision-making and favorable results in their organizations (Sadler-Smith, 2004). This study revealed similar findings as the study authors Westcott (Westcott, 1968), Agor (Agor, 1986), Andersen (Andersen, 2000), Khatri and Ng (Khatri and Ng, 2000) and Isenberg (Isenberg, 2001), which have shown a positive correlation between intuitive decision-making and efficiency and effectiveness of the organization.

This article talks about the partial results of the survey "Competencies intuitive operation top and middle managers of Slovenian automotive industry" and

determining the existence of a correlation between emotional intelligence and intuitive decision-making of top and middle managers in Slovenian automotive industry.

## **2 Emotional intelligence**

Interest in emotional intelligence (EI) has increased greatly over the last decade.

Although some researchers and practitioners have been quite optimistic about the importance of EI in organizations, critical questions remain about the concept, theory, and measurement of EI (Conte, 2005). The concept of EI was first identified by Peter Salovey and John D. Mayer in 1990. They said that the EI is defined as a set of capabilities for monitoring their own and foreign feelings and emotions, the distinction between them, and use of this information to keep their minds and behavior (Goleman, 1995). The concept of EI was finally established after the publication of *Emotional Intelligence* (1995), author Daniel Goleman. In the second part, *Working with Emotional Intelligence* (1998) (Pečjak and Avsec, 2003) he wrote that 25 different emotional skills that should form the construct of EI, and divided them into two groups: personal and social skills. The first ones decide on how to manage yourself and the others how well we manage relationships. Among the personal skills would fall skills: awareness of self (emotional awareness, accurate selfassessment, self-confidence), self-control (self-control, trustworthiness, conscientiousness, adaptability, perceptiveness for innovation) and motivation (the tendency towards the goal, commitment, initiative, and optimism). The social skills would imply: empathy (includes understanding of others, growth and development of others, helpfulness, commitment to diversity and commercial awareness) and social skills (influence, communication, conflict management, leadership, promoting change, grooming, cooperation and team skills) (Pecjak and Avsec, 2003).

## **3 Intuitive decision making style**

“Intuition is a process of thinking. The input to this process is mostly provided by knowledge stored in long-term memory that has been primarily acquired via associative learning. The input is processed automatically and without conscious awareness. The output of the process is a feeling that can serve as a basis for judgments and decisions” (Gladwell, 2008). People are often able of direct understanding of truth—the essence of which in times can be quite not obvious or hidden, and may even be contrary to common sense. Occasionally, we are able to withdraw from their own frame of knowledge, facts, logical thinking, existing thought patterns and solve the problem just like that, on the basis of something for which we know that we have and we do not know how and when we gain. In these cases, it is an area of intuitive thinking and decision-making. Intuition is known to a lot of people. Despite the fact that they rarely contemplate about it is nevertheless consciously or unconsciously often used. Gladwell argues that the ability to read fragments of data is not a special gift, which only a few have, but the main function of the human brain.

Intuition is not used until we realize we need to quickly resolve a problem or find ourselves in unfamiliar circumstances (Betsch, 2008). He said that fragments of the data are used in intuition, because we have to and we also rely on them even though we focus on them only for a second or two. Intuition cannot be inferred by an algorithm by which we come to certain conclusions. Our starting point is the unconscious level, where information is not accessible to consciousness. Intuition is related to the human subconscious mental processes and includes all previous experience to support our findings. The most important role in the process of solving problems which managers face is both rationality and reasonableness-causality. Namely, solving problematic situations in this manner is polished, already used and can therefore be augmented, have its own facts, its limitations and its logical conclusions, which may, if necessary, be controlled. But rationality alone does not necessarily mean the best solution for many problems, especially not for complex-multi-faceted problems which do not completely clear the input data and the solutions require resources (for example, sufficient time). In this case, the manager meets a completely new situation which he has never experienced in his career. The situation can be compared to a computer, which is programmed to solve certain types of problems. But when a problem occurs, for which the program does not exist yet, the problem is at the moment for a specific computer unsolvable. In these situations, which are in times of insecurity increasingly more visible, intuitive decision-making is increasingly gaining in importance.

Many managers report using intuition in their decision-making, in spite of the deeply rooted bias against non-rational methods (Agor, 1984a; Agor, 1984b; Dean, Mihalasky, Ostrander, and Schroeder, 1974; Isaack, 1978; Mintzberg, 1976; and Rowan, 1986). Managers report using intuition which ranges from inferential processes, performed under their own pre-existing database (Agor, 1986a,b,c,d) to acceptance and use of predictive abilities (Dean, Mihalasky, Ostrander, and Schroeder, 1974). Successful decision-makers have been found to have great predictive abilities (Cosier and Alpin, 1982; and Dean, Mihalasky, Ostrander, and Schroeder, 1974). However, many managers remain unwilling to acknowledge their use of intuition, fearing negative responses from their colleagues (Agor, 1986a, 1986b, 1986c, 1986d). Additional researchers who influence this study are Barnard (1968), Vaughan (1979), Hermann (1981), Isenberg (1984), Simon (1987), and Parikh (1994) (Fields, 2001).

The main purpose of the study is to identify a possible correlation between level of emotional intelligence and intuitive decision-making among top and middle-level managers in Slovenian automotive industry. Because we believe that correlation between level of emotional intelligence and intuitive decision-making exists, we developed main hypothesis: H1: there is a statistically significant correlation between level of emotional intelligence and intuitive decision-making among top and middle-level managers in Slovenian automotive industry.

## **4 Methodology**

### **4.1 Sample**

The sample frame (N) of planned research represented the top and middle-level managers of Slovenian companies, which operate mainly in the automotive industry. In this context, micro-companies, due to the high degree of specificity, were exempted from the sampling frame. The target population also excluded companies whose primary or predominantly own activity does not represent the automotive industry. The basic starting point for determining the input data of the target population in planned research was based on the actual queries from the register of business entities (AJPES) database and data on the current members of the Slovenian Automotive Cluster (ACS). For the reason of the relatively small sample frame - 250, the sample, i.e. interviewed population (n), equals the sampling frame survey ( $N = n$ ). Most of the respondents were between the ages of 31 and 40 years (44.4%), one third of them were between the ages of 41 and 50 years (33.3%), followed by 51-60 years category (13.3%). Most of the respondents have between one and five years of managerial experience (30.6%), followed by those with experience of 6 to 10 years (27.6%) and 16 years or older (19.4%). Slightly more than half (52.6%) respondents have a university degree, followed by those with a higher education (20.0%) and with a high school education or lower (15.6%). Most participants in the survey currently hold the Head of Department position or Project manager position (49.3%), followed by Field Directors (22.4%) and Area Managers (14.9%).

### **4.2 Instruments**

The instrument to measure emotional intelligence and intuitive decision making style was adapted from previous researchers. The data was collected by using two questionnaires.

The first questionnaire was used in order to determine emotional intelligence (SSEIT questionnaire) and the second questionnaire was used to identify decision-making style (GDMS questionnaire) among researched managers. SSEIT (Schutte Self-report Emotional Intelligence Test) questionnaire consists of 33 claims, which are answered on a scale from 1 (never) to 5 (always). Three arguments are scored in the reverse order ("I find hard to understand non-verbal messages of other people." "When I face the challenge, I give it up, because I think I cannot do it." "It's hard to understand why people think on their own."). Greater the sum of the claims, higher emotional intelligence we measure. The minimum value may therefore be 33 and the maximum 165 points.

GDMS (General Decision Making Style) consists of 25 claims on the basis of which we get five different styles of decision making: rational, intuitive, dependent, avoidant and spontaneous. Data obtaining method was online survey. The main

reason for selecting particular data collection method is in the economy and in adaptation of the method to the general mode of action to the research population.

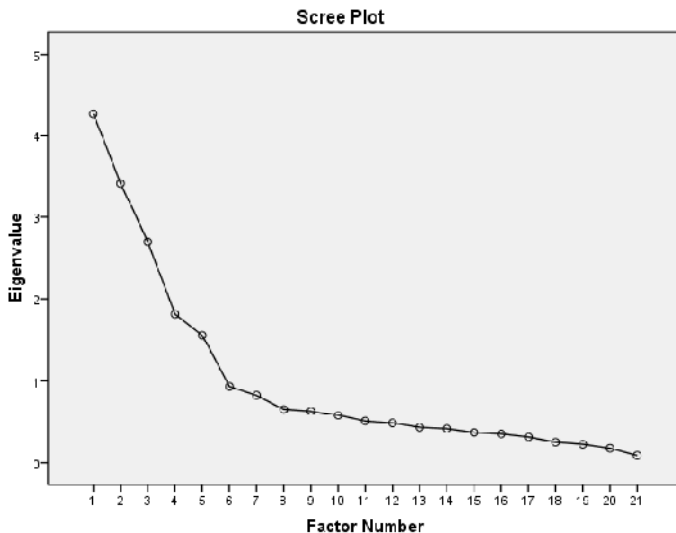
### 4.3 Data processing

We conducted a factor analysis first in which we verified whether the case in our decisionmaking styles arranges in five groups, i.e. factors. To determine the impact of emotional intelligence to the intuitive decision-making, we carried out a regression analysis using the Enter method.

### 4.4 Results

The sample is small (factor analysis was conducted on 113 respondents), but nevertheless satisfies the minimum conditions for the implementation of the factor analysis that the number of units is at least 5 times greater than the number of variables involved. Variables are approximately normally distributed, with no multicollinearity. Bartlett's test was statistically significant ( $\alpha = 0.000$ ), the value of KMO test amounts to 0,733, what makes the data suitable for factor analysis. With the factor analysis using the PAF method and varimax rotation, we get five factors, which have eigenvalues greater than 1. After rotation, the first factor explains 14.0% of the variance, the second 11.9%, 11.8% in the third, fourth 9.5%, the fifth factor of 8.5% of the variance. The total explained variance of 55.7%.

**FIGURE 1. SCREE PLOT**



The only significant factor for our study is the one that includes the variables of intuitive decision-making. This is factor 3, which contains four variables: " When taking a decision, I try to rely on my intuition.", " When taking a decision, I try to rely on my instincts.", "When taking a decision, I trust my inner feelings and responses." and " When taking a decision, it is more important that I think it's the right decision, as to have a reasonable argument for it." To determine the impact of emotional intelligence in intuitive decisionmaking, we carried out a regression analysis using the Enter method. For the dependent variable, we took the factor of intuitive decision-making, the independent variables are all variables that measure emotional intelligence.

**TABLE 1. SUMMARY OF REGRESSION BY ENTER METHOD**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,605	,366	,067	,94585606

The prognostic variables explained 36.6% of the variability of intuitive decision-making (Table 1).

**TABLE 2. ANOVA BY ENTER METHOD**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	36,101	33	1,094	1,223	,238
	Residual	62,625	70	,895		
	Total	98,726	103			

Regression model is not statistically significant ( $\alpha = 0.238$ ) (Table 2). We have tried to carry out a regression by a Stepwise method. In this case, we obtain two regression models.

**TABLE 3. SUMMARY OF THE REGRESSION MODEL BY STEPWISE METHOD**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,323	,105	,096	,93092878
2	,378	,143	,126	,91547327

The first explained 10.5% of the variability, while the other 14.3% of the variability of the dependent variable. As compared to the coefficient of determination the second model is better, we consider only this one (Table 3).

**TABLE 4: ANOVA BY STEPWISE METHOD**

Model	Sum of Squares	df	Mean Square	F	Sig.	
1	Regression	10,330	1	10,330	11,920	,001
	Residual	88,396	102	,867		
	Total	98,726	103			
2	Regression	14,079	2	7,040	8,400	,000
	Residual	84,647	101	,838		
	Total	98,726	103			

Model 2 is statistically significant ( $\alpha = 0.000$ ) (Table 4). Model included only variables "Emotions are one of the things that make life worth living." and "By listening to the tone of voice you can recognize people's feelings." Both have a statistically significant impact.

## 5 Discussion and conclusion

The survey included 136 respondents, 81.3% of whom were men. Most of the respondents were between the ages of 31 to 40 years (44.4%), followed by age group 41-50 years (33.3%). Respondents have from one to five years of experience (30.6%), 6 to 10 years (27.6%) or 16 years or more (19.4%). Slightly more than half (52.7%) of respondents have university degree. Slightly less than half (49.3%) participants hold the Head of Department position or the Project manager position. On average, respondents are in the upper quarter of emotional intelligence as they have collected 127.9 points out of 165 possible. With the factor analysis, we have examined whether the decision-making styles are assigned to five groups in our case. It turns out that this is true. We were interested only in factor that contains the variables of intuitive decision-making. Factor contains four variables that are otherwise substantially in this set. The fifth variable in the questionnaire was discarded due to lack of communalities. On average, respondents often decide intuitively, significant differences emerge by gender. On average women decide slightly more intuitively than men. By regression analysis, we examined the intuitive decision-making relationship with emotional intelligence. According to the Stepwise method we yield a model that is statistically significant, and by which 14.3% of the variability of the dependent variable is explained. In the model, there have been included only variables "Emotions are one of the things that make life worth living." And "By listening to the



tone of voice you can recognize people's feelings." Both have a statistically significant impact. The results of the study partly supported the hypothesis, which says that the statistically significant correlation between level of emotional intelligence and intuitive decision-making among top and middle-level managers in Slovenian automotive industry exist.

This study was constructed on the valid models and provides a contribution to the theory about intuitive decision-making style and emotional intelligence. The contribution is that this research explored the relationship between manager emotional intelligence and intuitive decision-making style. Recommendations for future research include expanding the research to different industries not only automotive industry. Thus, the similar study can be conducted with expanded sample size. The present study investigates intuitive decision-making styles while the future research can be conducted by utilizing the other decision-making styles which are not included in current study.

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