Decision-making style of agribusiness managers

Katarina Remenova*, Nadezda Jankelova

Department of Management, Faculty of Business Management, University of Economics,
 Bratislava, Slovakia
*Corresponding author: katarina.remenova@euba.sk

Abstract: How agricultural managers gain, process and use information in decision-making and problem-solving process refers to decision-making styles. A successful decision depends on the flexibility of using decision-making styles in different situations. The research paper monitors the dependence between the decision-making style of agricultural managers and their personal and working parameters. To identify the decision-making styles, the MB-type indicator (Myers-Briggs type indicator) was used. The results of non-parametric testing give proof that there is a statistically significant dependence between the type of decision problem and decision-making style, "Intuitive" and "Sensing". Parametric test ANOVA was applied to assess potential differences in the score of decision-making style by nominal-level variables. The results gave proof of a strong statistically significant difference in score of decision-making style, "Intuitive" and "Sensing" between groups of current leading position. The difference in scoring for "Thinking" and "Feeling" as decision-making styles was confirmed to be statistically significant even in functional areas of control. Subsequently, the size of this difference was calculated.

Keywords: agricultural manager's decision-making style; decision-making; functional area of control; management level team decision-making

European agri-food companies are operating not just in an environment of economics, but also climatic, legislative and IT turbulences (Fountas et al. 2006; Drafor 2016), impairing the decision-making process of agrarian managers to generate flexible, adaptive and dynamic decisions (Granoszewski and Spiller 2012; Robert et al. 2016). The critical phase in this process is to correctly identify decision-making issues and their boundaries (Öhlmér 1998; Tichá et al. 2010), especially in the pre-crisis and crisis periods (Tomšík and Svoboda 2010). Such decision-makers are managers with a characteristic style in making decisions (Hu et al. 2010).

According to study about the decision-making of agribusiness managers, conducted by Gonzalez-Ramirez et al. (2018), the decision maker has a short-term focus on immediate economic outcomes rather than on the long-term gains from environmental and social investments.

At the end of the 1970s, the first functional model of decision-making styles was developed, and it was focused on the method of processing information and the ability to solve problems in the decision-making process (Vroom and Jago 1978). The model is based on the assumption that leaders should be skilled in using all decision-making styles, but using each in different decision-making situations, while authors assume dependence of the use of the decision-making style on the complexity of the decision-making situation. The method of gaining and processing information to determine decision-making styles is based on cognitive psychology (Franken and Muris 2005) to improve farmers' analytical and decision-making skills (Braun et al. 2000) and refine the entire decision-making process

in agribusiness (Öhlmér et al. 1998). Also, the Willock's study emphasises the importance of psychological factors in the decision-making of farmers (Willock et al. 2008). Other study results point out the essence of decision-making of agricultural managers as intuitive decision-making (Nuthall and Old 2018).

DECISION-MAKING STYLE OF AGRIBUSINESS MANAGERS

The theory of decision-making styles, besides style characteristics, deals with the speed of the decision-making, acquisition and processing of information (Driver and Streufert 1969). The personality characteristic of "being willing" predicts a dependent style while, at the same time, awareness is an indicator of a rational decision-making style. The dependent style is determined by the neurotic type of decision-maker. The "sensitive" type places great emphasis on facts, details and reality (Gastil and Sager 2003).

Personality traits also influence the choice of decision-making rules. In relation to the personality type, the "distracted" attachment style is an indicator of the "hyper-vigilant" decision-making style. The "thinker" personality type positively correlates with the "directional" style of decision-making, but negatively with the "behavioural" style. The "analytical" style of decision-making depends on the "decisive" personality type, while the "perceptive" type negatively correlates with this decision-making style. An intuitive personality is inclined to adapt the "conceptual" style of decision-making (Ambrien et al. 2012).

Another model of decision-making styles is built on evaluating situations considered more important than generating alternative solutions. The approach is based on the recognition and comparison of models (schemes), where the observed problem is compared to the mental level of the decision-maker with the schemes (decisions) he/she has already implemented in the past. Phillips et al. (2008) created a model of decision-making styles – a style based on a rational selection model, a style based on a limited rationality model, a style based on a naturalistic model.

The creation of a multidimensional set of decision-making style characteristics was attempted by Israeli scientists (Gati et al. 2009), who created a model with eleven concurrent dimensions. Each dimension defines a specific decision-making style. The "Obtaining Information" dimension – a comprehensive and minimal style; the "Information Processing" dimension

– an analytical and holistic style; the "Decision Control" dimension – an internal and external style; the "Effort Involved in Decision-Making" dimension – less and more style; the "Procrastination" dimension – high and low style; the "Speed of Reaching a Final Decision" dimension – fast and slow style; the "Consultation with Colleagues" dimension – often and rarely style; the "Dependency on Others" – high and low style; the "Desire to Suit Others" dimension – high and low style; the "Attempting an Ideal Decision" dimension – high and low style; the "Willing to Agree on a Compromise" dimension – the willing and unwilling style.

One of the essential reasons why there are several different decision-making styles is the fact that there are several decision-making situations. Therefore, the role of the decision-maker is to use the appropriate style in a particular decision-making situation.

MATERIAL AND METHODS

A successful decision depends on the flexibility of using decision-making styles in different situations. Knowing which decision-making style poses manager and also her/his employees, creates extended opportunities for agribusiness manager to lead his company more effectively, according to specific personality traits of the employees. The research paper examines the dependence between the decision-making style of agricultural managers and their personal and working parameters. In the research presented here, the decision-making style of managers in leading positions in Slovak agribusiness companies was determined and associated with others personal (owning the current position) and working parameters (functional area of control, management level, team size, gender, decision problem). Whereas a decision-making style emanates from cognitive styles that are part of every person and shape with time and experience. This is the main reason to analyse why we have observed the age and the parameter how long the manager is in the leading position – as a time aspect of the decision-making style (Dror et al. 1998; Ejimabo 2015). Another reason is based on the nature of teamwork and the construction of a capable team. So that individual members are compatible according to their style of decision-making, gender, and a number of team members.

The statistical sample ($N = 150$ respondents) is comprised of Slovak agribusiness managers operating in tactical and top management. They are farm owners/managers, supervisors or team leaders in larger

companies responsible for finance and accounting, sales or distribution (logistics). The object was a list of companies available at Finstat.sk (2018). Then, the sample was created in PSPP statistical software by random selection.

The researchers have ensured the measurement objectivity by using data collection tools in the electronic form to prevent influencing the research subject. The survey was carried out among Slovak enterprises in 2017, while the return of filled-in questionnaires was 17%.

The research study was based on two types of tools of data collection – questionnaire and decision-making test. The observation survey was conducted using a questionnaire on the managers' decision-making. The questions were drawn up by the researcher to meet the qualitative criteria. Multiple responses were mutually exclusive, and all acceptable responses were offered. All questions in the questionnaire were analysed. The monitored variables in the questionnaire were both numeric and categorical, with the measurement scales used as follows – interval variable was used for sorting economic criteria, the nominal variable was used for categorical data, the binary variable was used to test decision-making style.

To identify the decision-making styles in the research project, a standardised test Myers Briggs type indicator was used, observing two dichotomies Sensing/Intuiting and Thinking/Feeling. These dichotomies represent a way of obtaining information and their processing and how to use information in the decision-making process.

The reason for using the MBTI (Myers Briggs type indicator) is its high reliability. The Cronbach's alpha (α) was used to analyse the reliability of the decision-making style test in Slovak conditions. Reliability scale Intuiting/Sensing/Thinking/Feeling ranged from 0.83 to 0.86. By comparing the reliability values with other authors (Ambrien et al. 2012) and testing tools, the values presented in current paper represent an acceptable reliability level of the MBTI test for the decision-making style.

The reason why we focused on this theme was that there are insufficient scientific studies addressing the topic of decision-making style of agricultural managers, despite that the success of the whole business depends on the way managers decide. We attempted to fill in this gap in the literature of farm management and agribusiness. There are some research papers about farmer's intuition or their behaviour and personality (Nuthall and Old 2018).

Data analysis

The data obtained through the questionnaire about decision-making are nominal (level of management, a functional area of control, gender) and ordinal variables (the number of team members, age of the manager, owning the current management position – number of years). The data obtained from MBTI denote interval variables, presented as Score of decision-making style (Score of DMS). Two-dimensional inductive statistics methods were used to test the dependence of the variables. The non-parametric Chi-square test of independence was used to test the dependence of the decision-making style (Sensing-Thinking, Sensing-Feeling, Intuiting-Thinking, Intuiting-Feeling) and personal and working parameters. This test is based on the assumption that the nominal variables are employed in the analysis for $r \times c$ contingency table. Chi-square provides information on the significance level of the observed variables, but also provides detailed information on exactly which categories account for any differences.

The strength of association was measured through the Eta coefficient and the proportion of variability explained by the nominal variable (η^2). The Cohen scale was used to interpret the strength of association between variables.

The parametric one-way ANOVA was used to identify and define the range in differences between decision-making style scores of managers within groups of nominal variables. Analysis of variance is a tool for comparing the means of two groups (the independent variable) on the dependent variable to detect a statistically significant difference between the means. The analysis produces *F* ratio, which means ratio of two mean squares (a measure of dispersion) and tests the equality of means.

Then the effect size *r* was calculated as a square root of the percent variance between groups (SSM) and total variance (SST). The assumption of homogeneity of variance and sphericity assumption was measured through Levenev's test. It represents a homogeneity of variance test that is less dependent on the assumption of normality than the most of the tests. It computes the absolute difference between the value of that case and its cell mean and performs a one-way analysis of variance on those differences. The formula to compute Levene's Statistic:

$$F = \frac{(N-k)\sum n_i (Z_i - Z)^2}{(k-1)\sum (Z_i - Z)^2} \tag{1}$$

where:

n_i – number of observations in each group;

k – number of groups;

N – total number of observations;

Z_{ij} – absolute deviations ($|Y_{ij} - i|$), i represents the mean of group i;

Z – mean of all the absolute deviations (Z_{ij});

Z_i – mean of the absolute deviations (Z_{ij}) for group i.

The data were analysed in PSPP statistical software. Hypotheses were tested at a significance level of $p \leq 0.05$; while maintaining the primary rule of the Chi-square test of independence, where the theoretical frequencies did not fall below a value of 5 in 80%, and for other values $X > 1$ applied. Null and alternative hypotheses were tested, which we present in individual results.

RESULTS AND DISCUSSION

Decision-making style among agribusiness managers

A decision-making style consists of two ways of perceiving – Sensing (SE) and Intuition (INT) and of two ways of judging – Thinking (THI) and Feeling (FEE) of information. This construct is a combination of individual values, interests and habits. The objective of the research was to identify individual decision-making styles of Slovak managers among agribusiness companies and to find out the association with personal and working parameters. The most used decision-making style of these managers is Sensing-Thinking style (almost 65%). The distribution of decision styles among agribusiness managers in Slovakia is shown in Table 1.

Based on the results from descriptive statistics, we can claim that the managers are more Sensing than

Table 1. Frequency table for decision-making styles (DMS)

DMS	Frequency	Percentage (%)	Cumulative percentage (%)
Intuiting-Feeling	4	2.66	2.66
Intuiting-Thinking	31	20.66	23.32
Sensing-Feeling	18	12.02	35.32
Sensing-Thinking	97	64.66	100.00

Source: researchers' own processing in PSPP

Intuiting. This result refers to a style of how people obtain information for decision-making. In the sub-style method of processing information for decision-making, respondents are more analytical than feeling. Simultaneously, the rating of individual styles in the Sensing scale was more variable, compared to the response scale in the Intuiting. The difference in variability in the Thinking and Feeling scores was minimal. The distribution normality was tested through the Kolmogorov-Smirnov test. The significance level of the p-value for all decision styles is higher than 0.05, meaning that the test is statistically significant and the assumption of a normally distributed data is disrupted. The following hypotheses were tested:

H_0: There is no dependence between the Score of decision-making style and the personal and working parameters.

H_1: The Score of decision-making style and the personal and working parameters are related to one another.

The non-parametric Chi-square test of independence was used to test the dependence of Score of decision-making style and the personal and working parameters. The Eta coefficient measures the relationship between the nominal and the interval variables. The summary results are shown in Table 2.

Gender. Hypothesis H_1 is rejected at the p-value ≤ 0.05 significance level, as no statistically significant dependency exists between the composition of the team (only men, only women or mixed) and the Score of decision-making style (p-value$_{INT}$ = 0.251, p-value$_{SE}$ = 0.168, p-value$_{THI}$ = 0.219, p-value$_{FEE}$ = 0.462)[1]. The variable composition of teams explains only a very low percentage of variability in the Score of decision-making style (η^2_{INT} = 1.21%, η^2_{SE} = 2.25%, η^2_{THI} = 0.81%, η^2_{FEE} = 0.64%). Likewise, the H_1 hypothesis is rejected at the significance level of p-value ≤ 0.05 with respect to the dependency of both functional management and management level on the number of decision-making style points.

The dependence between the decision-making style and the type of decision-making problem was confirmed in two of the styles. In the case of Intuiting, we accept the alternative hypothesis H_1 at the significance level of p-value ≤ 0.05. There is a statistically significant dependence (p-value$_{INT}$ = 0.024) on the coefficient of the strength of association Eta = 0.47, which explains 22% of its variability. Hypothesis H_1

---

[1]p-value$_{INT}$ – p-value for variable decision making style Intuiting, p-value$_{SE}$ – p-value for variable decision making style Sensing, p-value$_{THI}$ – p-value for variable decision making style Thinkig, p-value$_{FEE}$ – p-value for variable decision making style Feeling.

Table 2. Summary results table for association between Score of DMS and other parameters

Parameters		Decision-making style			
		Intuiting	Sensing	Thinking	Feeling
Gender	Eta	0.11	0.15	0.24	0.08
	η^2	0.0121	0.0225	0.0576	0.0064
	p-value	0.251	0.168	0.469	0.462
Functional area of control	Eta	0.18	0.18	0.34	0.33
	η^2	0.0324	0.0324	0.1156	0.1089
	p-value	0.850	0.978	0.301	0.592
Management level	Eta	0.12	0.11	0.03	0.02
	η^2	0.0144	0.0121	0.0009	0.0004
	p-value	0.138	0.089	0.932	0.953
Decision problem	Eta	0.47	0.48	0.10	0.10
	η^2	0.2209	0.2304	0.01	0.01
	p-value	0.024	0.030	0.210	0.376

DMS – decision-making style; Eta – coefficient of strength of association; η^2 – Eta squared (measure of effect size)

Source: researchers' own processing in PSPP

is accepted at *p*-value ≤ 0.05 significance level, and the null hypothesis is rejected because there is a statistically significant dependence (p-value$_{SE}$ = 0.030) on Eta = 0.48 explaining 23% of the variability in the decision-making problem.

Functional area of control and management level. Classifying decision-making styles by functional areas of control allows us to observe the density of their divisions in terms of activities. The scope and size of functional areas of control depend on size and organisational structure. Until now, no comprehensive study has ever been published to monitor the dependence between decision style and the functional areas of a control (such as production, marketing, finance, IT and marketing). Therefore, we sought to determine the different styles represented in functional areas.

Hypothesis H_1 is rejected at the *p*-value ≤ 0.05 significance level as no statistically significant dependency (p-value$_{INT}$ = 0.850, p-value$_{SE}$ = 0.987, p-value$_{THI}$ = 0.301, p-value$_{FEE}$ = 0.592) exists between the Score of decision-making style, the functional area of control and the management level. The decision-making style score only explains a very low variability in functional areas of a control (η^2_{INT} = 3.24%, η^2_{SE} = 3.24 %, η^2_{THI} = 1.16%, η^2_{FEE} = 1.09%). Even lower variability in decision-making style scores was found for the management level variable.

Age, team members and current position. A research study published by a trio of authors (Dror et al. 1998) on the impact of age on decision-making style

showed the age of survey respondents to have had no impact on their decision-making styles. The study also monitored whether older respondents accepted the same or lower exposure to risk when they were making decisions. Both younger and older respondents decided with the same degree of risk. The work of Ejimabo (2015) asserted the opposite, writing that decision-making style depends on age. Based on the adverse results of the studies, we monitored a typical decision-making style in each age group. Table 3 depicts the summary results for dependency between Score of decision-making style and personal and working parameters.

The alternative hypothesis H_1 has been rejected at the *p*-value ≤ 0.05 significance level and accepted the null hypothesis H_0 because the *p*-value in all analysed relationships is greater than 0.05. There is no statistically significant dependence between the examined variables. All values suggest only a trivial dependence. Points scored in the decision-making style test are unrelated either to age or the number of people managed in the team nor even to how long the team leader has been managing the team.

The teams have to be assembled in a certain way to provide optimum performance. The teams whose members share the same opinions, values and way of thinking are often doomed to failure. The necessary synergy coming from a diversity of decision styles is an important prerequisite for optimal decision-making by both the team leader and among individual members (Remeňová et al. 2018). However, this

Table 3. Summary results table for association between Score of DMS and personal parameters

Parameters		Decision-making style			
		Intuiting	Sensing	Thinking	Feeling
Owning of current position	Eta	0.09	−0.09	−0.09	−0.09
	η^2	0.0081	0.0081	0.0081	0.0081
	p-value	0.051	0.065	0.188	0.114
Number of team members	Eta	−0.11	0.12	0.12	−0.12
	η^2	0.0121	0.0144	0.0144	0.0144
	p-value	0.685	0.729	0.266	0.228
Age_interval	Eta	−0.01	0.01	0.06	−0.06
	η^2	0.0001	0.0001	0.0036	0.0036
	p-value	0.464	0.532	0.075	0.116

DMS – decision-making style; Eta – coefficient of strength of association; η^2 – Eta squared (measure of effect size)

Source: researchers' own processing in PSPP

prerequisite has not been affirmed by analysis. There is no impact of the team size on decision-making style, and the variability is explained only by 14%. Therefore, we reject alternative hypothesis H_1 at the significance level of *p*-value ≤ 0.05, and accept null hypothesis H_0, because $p\text{-value}_{INT} = 0.685$, $\eta^2_{INT} = 1.2\%$; $p\text{-value}_{SE} = 0.729$, $\eta^2_{SE} = 1.4\%$; $p\text{-value}_{THI} = 0.266$, $\eta^2_{THI} = 1.2\%$; $p\text{-value}_{FEE} = 0.228$, $\eta^2_{FEE} = 1.4\%$. Neither the size of the team nor its composition is typical for any manager's decision-making style. The even distribution in the size and composition of teams makes clear the independence between these parameters.

Differences in decision-making style scores within groups. The parametric test One way ANOVA was used to identify and define the range of differences in managers' decision-making style scores within groups of nominal variables. The results of the Levene's test for analysing the sphericity and homogeneity of variance does not confirm the violation of this assumption if *p*-value > 0.05. We followed the basic hypothesis of statistically significant differences in business-related (functional area of control, management level, number of team members) and personal parameters (gender, owning of the current position, age of managers) that vary in the decision-making style score.

The following hypotheses were tested:
H_0: There is no statistically significant difference in Score of decision-making style between the groups of functional area of control/management level/number of team members/gender, owning of current position, age of managers.

H_1: There is a statistically significant difference in Score of decision-making style between the groups

Table 4. Summary results table for ANOVA and homogeneity of variance

Parameters	Decision-making style									
	Intuiting					Sensing				
	Levene statistic	Sig.	*F*	Sig.	*r*	Levene statistic	Sig.	*F*	Sig.	*r*
Functional area of control	0.86	0.524	0.85	0.529	–	0.42	0.868	1.05	0.395	–
Gender	1.95	1.450	0.62	0.540	–	1.15	0.320	0.41	0.662	–
Management level	0.26	0.775	0.38	0.685	–	0.30	0.744	0.35	0.703	–
Owning of current position	1.81	0.127	3.93	0.004	0.236	1.24	0.295	3.51	0.008	0.225
Number of team members	0.88	0.415	0.56	0.573	–	1.07	0.344	0.50	0.605	–
Age_interval	0.09	0.965	1.61	0.187	–	0.16	0.926	1.81	0.146	–

Sig. – significance level; *F* – *F* test statistic; *r* – effect size for ANOVA; Age_interval – age as ordinal variable

Source: researchers' own processing in PSPP

Table 5. Summary results table for ANOVA and homogeneity of variance

| Parameters | Decision-making style | | | | | | | | | |
| | Thinking | | | | | Feeling | | | | |
	Levene statistic	Sig.	F	Sig.	r	Levene statistic	Sig.	F	Sig.	r
Functional area of control	0.63	0.708	2.51	0.022	0.23	0.62	0.711	2.47	0.024	0.23
Gender	0.87	0.420	1.72	0.180	–	0.78	0.458	1.57	0.210	–
Management level	1.16	0.316	0.33	0.722	–	1.16	0.315	0.32	0.726	–
Owning of current position	0.36	0.836	0.47	0.755	–	0.39	0.819	0.53	0.714	–
Number of team members	4.32	0.014	2.00	0.138	–	4.07	0.018	2.21	0.112	–
Age_interval	0.24	0.866	0.97	0.406	–	0.30	0.826	1.06	0.367	–

Sig. – significance level; F – F test statistic; r – effect size for ANOVA; Age_interval – age as ordinal variable

Source: researchers' own processing in PSPP

of functional area of control/management level/number of team members/gender, owning of current position, age of managers.

Tables 4–5 show the results from the ANOVA statistical analysis and the Levene statistics and data normality testing that were the conditions.

As it turned out, the results presented in Table 5, indicate that the different manager groups, broken down by functional area of control, significantly statistically differ from each other in the Score of decision-making styles of Thinking, $F(6,150) = 2.51$, p-value < 0.05 with a variability of 23% and Feeling, $F(6,150) = 2.47$, p-value < 0.05 with a variability of 23%. The highest number of points in Thinking was scored by finance and IT department managers, while sales and logistics managers scored highest in Feeling. No difference was seen in Intuiting and Sensing.

A statistically significant difference in Intuiting, $F(4.150) = 3.93$, p-value < 0.05, with a mild effect $r = 0.234$, and Sensing, $F(4,150) = 3.51$, p-value < 0.05, likewise with a slight effect, was found in individual groups of the variable owning of current position. No statistically significant difference was reflected in the decision-making style scores found for different groups of other personal and working parameters.

Based on the results of the statistical analysis, we can state that decision-making style is a stable element of the decision maker's personality. The fact that the age of the manager does not affect his decision-making style and is stable over time, the study confirmed Dror et al. (1998). This explains the stability of the decision-making style over time, in terms of team structure (according to gender) and number of direct subordinates. According to the study results (Muhammad et al. 2010), gender shows no significant difference in their decision-making style.

Also, management level, a functional area of control, or how long is the manager in leading position do not affect the decision-making style.

A very strong association emerged between Sensing and Intuiting styles in relation to decision-making problems, which are described as „well" or „ill-structured" decision problems. Well-structured decision-making problems have a clear solution with its own procedure, algorithm and clear methodology. On the other site, ill-structured decision-making problems have a unique nature and have multiple solution methods, which require a higher level of cognitive thinking.

CONCLUSION

The aim of our research paper is to fill the gap by investigating the relationship between age, the structure of the team from a gender point of view, team size and working parameters such as management level, a functional area of control on decision-making styles of managers in the agribusiness sector. The decision-making style is defined through the method of obtaining, processing information and decision-making. Which style of decision-making style is represented among agribusiness managers we have identified through the MBTI. The decision-making style most found is Sensing-Thinking (almost 65% of respondents), while Intuiting-Feeling is the style least common among agri-managers, with less than 3%. In addition, the dependence between business and working parameters and individual decision-making styles was detected.

A very strong association emerged between Sensing and Intuiting styles in relation to decision-making problems (well or ill-structured) (p-value$_{INT}$ = 0.024, Eta = 0.47; p-value$_{SE}$ = 0.030, Eta = 0.48), while dependence on a decision-making style was not confirmed in any of the remaining parameters. This explains the stability of the decision-making style over time, in terms of team structure (according to gender), number of direct subordinates. Management level, a functional area of control, or how long is the manager in leading position do not affect the decision-making style.

ANOVA's parametric testing was subsequently used to evaluate the variance of the decision-making style scores by individual groups of working and personal parameters. The difference in Score of decision-making style Thinking and Feeling in functional areas of control was seen to be statistically significant. The highest number of points in Thinking was scored by managers from the finance and accounting area and technical managers, while sales and logistics managers scored the highest in Feeling. A statistically significant difference was again seen in the Intuiting and Sensing decision-making styles in the parameter how long own the manager his current position. Managers working in a leading position for less than three years scored the most points in the Intuiting and Sensing decision-making style. In the other parameters, the number of points did not vary significantly.

Practical implications

Knowledge about decision-making styles will allow agribusiness managers to operate in a turbulent environment (which is so typical for uncertainty) and will increase the efficiency and quality of the decisions. Agribusiness managers can use the information on decision-making styles on two decision levels. The first one is the manager with a unique style of obtaining and processing information for decision. By testing your own decision-making style, the manager gets the exact specification of his style as well as the recommendations for his efficacy use. Sensing style focuses on what is real and up-to-date. Its domain is the sequential gathering of information while working systematically. The Thinking style uses a logical process that allows the manager to target impersonal conclusions and decisions. This style decides on the basis of clear facts. Intuitive style focuses on the general picture and prefer intuitive acquiring of information. Feeling style decides on the basis of feelings, not only of their own, but also of his fellows.

On the second level, they have to deal with the decision-making style of their subordinates, to assign them the appropriate tasks (described as well or ill-structured decision problems with their characteristics), which the subordinate can properly execute with his style as well as cognitive skills. Also, when hiring new staff for tasks that have arisen in the company. Then the age of the employee or gender need not be taken into account. If knowledge of decision-making styles was used at both levels, the overall economic efficiency of an agribusiness company might increase.

Limitation of study

The results of the research study provide answers to the decision makers of Slovak agrarian managers. The article focuses on the specific issues of personal and working parameters, and the leadership team's decision style. Since we have tested only leading managers, research does not include knowledge of the decision style of individual subordinates. Therefore, they should also be examined. The next research focus should be on the relationship between the effectiveness of decisions made by managers and the compatibility with individual subordinate's decision-making styles.

REFERENCES

Ambrien A., Hasnain N., Venkatesan M. (2012): Decision making in relation to personality types and cognitive style of business students. The IUP Journal of Management Research, 9: 20–29.

Braun A.R., Thiele G., Fernández M. (2000): Farmer field schools and local agricultural research committees: complementary platforms for integrated decision-making in sustainable agriculture. The Agricultural Research and Extension Network, 105: 1–15.

Drafor I. (2016): Access to information for farm-level decision-making. Journal of Agricultural & Food Information, 17: 230–245.

Driver M.J., Streufert S. (1969): Integrative complexity: an approach to individuals and groups as information-processing systems. Administrative Science Quarterly, 14: 272–285.

Dror I.E., Katona M., Mungur K. (1998): Age differences in decision making: To take a risk or not? Gerontology, 44: 67–71.

Ejimabo N.M. (2015): The influence of decision making in organisational leadership and management activities. Journal Entrepreneurship and Organisation Management, 4: 138–151.

Finstat.sk (2018): Finstat.sk. Available at https://finstat.sk/

Fountas S., Wulfsohn D., Blackmore B.S., Jacobsen H.L., Pedersen S.M. (2006): A model of decision-making and information flows for information-intensive agriculture. Agricultural Systems, 87:192–210.

Franken H.A.I., Muris P. (2005): Individual differences in decision-making. Personality and Individual Differences, 39: 991–998.

Gastil J., Sager K. (2003): The origins and consequences of consensus decision making: a study of the relationship among personality factors, decision rules and group outcomes. Southern Communication Journal, 71: 1–24.

Gati I., Landman S., Davidovitch S., Asulin-Peretz L., Gadassi R. (2009): From career decision-making styles to career decision-making profiles: A multidimensional approach. Journal of Vocational Behavior, 76: 277–291.

Gonzalez-Ramirez J., Arora P., Podesta G. (2018): Using insights from prospect theory to enhance sustainable decision making by agribusinesses in Argentina. Sustainability, 10: 1–15.

Granoszewski K., Spiller A. (2012): Farmers' decision behaviour regarding investments in biogas production. Berichte uber Landwirtschaft, 90: 284–301.

Hu B.L., Wang G.P., Lu Y.Y. (2010): An empirical study on Qingdao farmers' decision-making style. In: Proceedings Scientific Research Publishing. International Conference on Engineering and Business Management, Chengdu, China, March 25–27, 2010: 2313.

Muhammad N.M.N., Isa F.M., Othman S.N. (2010): Does decision making styles differ by leadership hierarchical level, knowledge and demographic profile in higher education institutions? In: Proceedings 5th International Conference on Knowledge Management, Kuala Terengganu, Malaysia, May 25–27, 2010: 227–231.

Nuthall P.L., Old K.M. (2018): Intuition, the farmers' primary decision process. A review and analysis. Journal of Rural Studies, 58: 28–38.

Öhlmér B. (1998): Models of farmers' decision making – Problem definition. Swedish Journal of Agricultural Research, 28: 17–27.

Öhlmér B., Olson K., Brehmer B. (1998): Understanding farmers' decision making processes and improving managerial assistance. Agricultural Economics, 18: 273–290.

Phillips T., Wren G., Ichalkaranje N., Jain L.C. (2008): Intelligent Decision Making: an AI-Based Approach. Springer, Berlin: 410.

Remeňová K., Skorková Z., Jankelová N. (2018): Span of control in teamwork and organisation structure. Montenegrin Journal of Economics, 14: 145–155.

Robert M., Thomas A., Bergez J.E. (2016): Processes of adaptation in farm decision-making models. A review. Agronomy for Sustainable Development, 36: 64.

Vroom V.H., Jago A.G. (1978): On the validity of the Vroom-Yetton model. Journal of Applied Psychology, 63: 151–162.

Willock J., Deary I.J., Edwards-Jones G., Gibson G.J., McGregor M.J., Sutherland A., Dent J.B., Morgan O., Grieve R. (2008): The role of attitudes and objectives in farmer decision making: Business and environmentally-oriented behaviour in Scotland. Journal of Agricultural Economics, 50: 286–303.

Tichá I., Hron J., Fiedler J. (2010): Managerial decision making – importance of intuition in the rational process. Agricultural Economics – Czech, 56: 553–557.

Tomšík P., Svoboda E. (2010): Diagnostics and decision-making of the company management within the period of economic crisis and recession. Agricultural Economics – Czech, 56: 303–309.