

STRATEGIC AND CRISIS MANAGEMENT IN AGRICULTURAL ENTERPRISES IN THE CZECH REPUBLIC

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Abstract

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Agricultural enterprises should constantly try to improve themselves. They need strategic management to manage their innovativeness in a focused manner, and to achieve growth and satisfy their strategic objectives in a way that minimizes the high-inherent risks or crises. The paper deals with a sub-research of the management of small and medium-sized enterprises in the Czech Republic. It is focused on the use of strategies in SMEs (especially for agriculture) management and the assessment of the significance of crises. Data were gathered as questionnaires and interviews from 183 (thereof 34 agricultural) enterprises operating in the Czech Republic. The research was done in 2015. Only about 15% of the agricultural enterprises have formulated a strategy for the future direction of their enterprise. The crises did occur in all organizations, in varying degrees and intensity. The significance of this crises was assessed by an average mark of 3.5 (where 5 was the highest). Subsequently they analysed relationships among 17 major crises and compared the relations in other sectors.

Keywords: agricultural enterprises, crisis, Czech Republic, hypothesis, importance, management, strategy.

INTRODUCTION

Comparing the Czech agriculture to the agriculture in the EU-15, there is a significantly higher average size of enterprise, which are mostly owned by legal persons and more than 80% of the land they farm is leased. Comparison between economy of agriculture in the Czech Republic and agriculture in the EU-15 confirms the existing reserves to increase the competitiveness of Czech agriculture (ÚZEI, 2010). Canenbley, Feindt, Gottschick, Müller, and Roedenbeck (2004) outline the lack of competitiveness of small agricultural enterprises as a central problem for agriculture, alongside an imbalance between production cost and product prices and a lack of recognition of agricultural work. A decisive factor is the perceived high competitive pressure resulting from the creation of a unified, liberalized European agricultural market (Blattel-Mink *et al.*, 2017).

The Czech agriculture in relation to European Union deals with the issues in terms of increasing

the competitiveness of agricultural and food products to third countries on the basis of a higher quality, safety, diversity and value-added products to maintain the agricultural cultural landscape by reducing the pressure of agriculture on biodiversity loss, a deeper connection of agriculture and rural development and non-food use of agricultural production, particularly as renewable energy sources (MZE, 2006). These strategic objectives are supported by measures of agricultural policy of the Czech Republic, in particular by the subsidy policy (Novotná and Volek, 2016). The production has always been the priority for agriculture within its performance in the truest sense of the word (Hrabánková *et al.*, 2008).

The competitiveness of agriculture in individual countries is also affected by economic policy measures (Grega, 2004). The greatest risk to the future of Czech agriculture might be: the lack of qualified future generations, sale of land to people who are not farmers – limiting long-term

development of enterprises, political stability and business environment, size (our strength and weakness – unwillingness to associate to sales organizations and inability to respond to global market coupling and opening the EU market to other countries and inability to increase competitiveness through effective research and practice (innovation) (Pýcha, 2015).

There are only a few options for Czech farmers to make the situation better. One of the options is to choose a strategy of differentiation. Since it is not possible to reduce on a large scale the cost of production, it is necessary to specialize to the realization of such products that are not normally offered in the EU, and where the competition is lower (Chládková and Formánková, 2016). Another option is to enrich the offer in the market with any component of marketing. Another possibility is to broaden the current range of additional services like agro tourism (Brelík, 2013). This is currently offered only to a limited extent in Czech agriculture (Tomášková, 2008, Budíková and Králová, 2010).

The field of strategic management is largely concerned with how firms generate and sustain competitive advantage (Ambrosini and Bowman, 2009). Strategy has been defined by Johnson and Scholes (1993) as the direction and scope of an organisation over the long term: ideally, which matches its resources to its changing environment, and in particular, its markets, customers or clients to meet stakeholder expectations. Strategy is an organizing process that involves both formulation and implementation (Porter, 1996). Strategy is the pattern of decisions in a company that determines and reveals its objectives, purposes, or goals, produces the principal policies and plans for achieving those goals (Andrews, 1971, Freeman, 2010). Strategy is about how an organization sets about getting to where it wants to get (Thompson and Martin, 2010, Švárová and Vrchota, 2013).

Developing organisational strategy can help organisations to avoid or limit the severity of rapid change induced by crises or disasters (Ritchie, 2004). A number of techniques have been identified by researchers and practitioners to help in the proactive planning and strategy development for the prevention or reduction of crises and disasters through sensing potential problems (Gonzales-Herrero and Pratt, 1998, Kash and Darling, 1998).

There are the main influences which determine the strategy and style of management of crisis (Booth, S.A., 2015). A number of authors have attempted to define a crisis to help improve their understanding of this phenomenon. Rais (2007) defines the crisis as such a stage in the life of an organization with a negative development of its productive potential and decline in sales for a long period of time. Fialová and Fiala (2006) define the crisis as accumulation of negative influences that make the proper functioning in the area impossible, calling for problem-solving approaches.

In March 2004, the European Commission set forth a document discussing the issue of "Risk and Crisis Management in EU Agriculture. According this document is crisis unforeseen, that it exceeds the individual capacity to cope, and that it affects a large number of producers (Cafieoro *et al.*, 2007). The crisis is characterized by conflict intensification in all resource fields. If the crisis is not solved it leads to a loss of efficiency of an enterprise and it can result in its cessation (Šturcová, 2010). Generally speaking, the crisis it described as a decisive moment. This is the time when the organization develops adverse performance and unless the situation is resolved in time its existence is at risk (Řehoř, 2016).

The ability of business owners/managers to think strategically in the midst of a crisis is a key factor in an organization's long-term survival, but at present there is very little advice available on how to do this most effectively (Vargo and Seville, 2011). Some managers shine during a major crisis, while others don't. As a strategic manager, one must follow a comprehensive protocol that includes the implementation of teams, systems and tools to respond to a crisis (Springer, 2008). Strategic management of crises requires planning and preparation as well as the consideration of events and impacts that managers and stakeholders would rather not think about. It is also important to have a crisis communication plan in place (Keown-McMullan, 1997; Coomgs, 2004; Švárová and Vrchota, 2014).

MATERIALS AND METHODS

This article aims to assess the impact of a strategy of an agricultural enterprises to the importance of the crisis, as seen by the managers in the Czech Republic and subsequently to characterize relations between occurrences of the crisis. A partial objective is to evaluate the relation between the importance of crises and a defined strategy within the sectors of the national economy as classified by OECD (2014): A1: Industry: High and Medium High Technology, A2: Industry: Medium Low and Low Technology, B1: Knowledge-intensive market services, B2: Less knowledge-intensive market services, C: Agriculture, construction and utilities.

In the interviews, the managers evaluated and discussed the crisis in their organizations in past years, and consequently, their rating was summarized using five-point Likert scale, where 1 represented the crisis, that was not seen important in terms of the business and 5 represented the crisis seen as very important.

The data were collected from 183 companies (34 agricultural enterprises) in the Czech Republic in 2015. Research sample was selected using non-probable random selection, with regard to circumstances of the data collection. The data necessary for conducting the research were collected by a questionnaire survey and they were

supplemented by qualitative data, obtained through in-depth interviews as well as case studies.

Representatives of different companies responded to questions concerning mainly crises that they had to solve during their operation on the market. Each of the selected companies identified at least 3 crises they had to deal with trying to minimize the impact on their business activities. Crises that were defined this way were consequently divided into 19 categories. The total number of crisis occurrences was 753. The authors examined 143 crises.

Data were tested using two-sample Wilcoxon test and its asymptotic variant. This test is a non-parametric two-sample test, which is most frequently used, when the condition of data normality is not met. For the test, the condition of good approximation ($80\% \geq 5$ and $20\% \geq 2$). Let $X_1, \dots, X_n$ and $Y_1, \dots, Y_m$ be two independent random samples with two continuous distributions, whose distribution functions can only differ in displacement. $x_{0.50}$, $y_{0.50}$ stands for the median of the first and second distribution. The hypothesis that the distribution functions of the two distributions are the same is always tested, in other words, the medians are tested for equality. The result of test is compared to the alternative hypothesis (the first of medians $x_{0.50}$ of companies which are strategic managing, is greater than the latter) (Freund, Wilson *et al.* 2010; Friedrich and Majovská 2010).

In the first stage, all $(n + m)$ values $X_1, \dots, X_n$ and $Y_1, \dots, Y_m$ are arranged in ascending order by size. The entire process takes place electronically using test statistical software and this step is not described in the article, because it is a lapidary operation. Furthermore, the totals of orders $X_1, \dots, X_n$ are identified and stated as T_1 . The sum of the values in the order of companies which are not managing strategically $Y_1, \dots, Y_m$ will be stated as T_2 . The next step was to calculate the test statistics for U_1 and U_2 , while applies that $U_1 + U_2 = m \times n$ (Friedrich and Majovská, 2010).

If statistics $\min\{U_1, U_2\} \geq$ tabulated critical value, for the selected ranges of both selections and chosen level of significance, then than we may reject the null hypothesis of the identity of the compared groups on the significance level $\alpha = 0.05$ and $\alpha = 0.1$. Since for both samples in all test cases applies that n, m are greater than 30 the asymptotic variant of the Wilcoxon test (Mann-Whitney test) is undertaken, which is used for n and m higher than thirty.

Critical codomain for right-side alternative id $W = \langle k_2, n \rangle$. Non-negative values of k_1 a k_2 are strictly defined in critical literature. H_0 is rejected

on the level of significance α , if $U_0 \in W$ (Freund, Wilson *et al.*, 2010). Subsequently, the analysis of individual instances of crises and their relationships using correlation will be performed. Correlation is a measure of the relation between two or more variables. The measurement scales used should be at least interval scales, but other correlation coefficients are available to handle other types of data. Correlation coefficients are ranged from -1.00 to $+1.00$. The value of -1.00 represents a perfect negative correlation (the relationship between two variables is such that as one variable's values increase, the other variable's values decrease) while a value of $+1.00$ represents a perfect positive correlation. A value of 0.00 represents a lack of correlation. Correlation itself does not constitute a causal relationship between two variables, but it is one of the criteria of causality (Ferjeník, 2000; Meloun, 2002; Babbie, 2009).

RESULTS AND DISCUSSIONS

Strategic management formulates the principles for functioning of entire enterprises and defines the long-term priorities, direction and areas that managers should deal with. Using strategies, they determine the way the corporate objectives are achieved. Properly set strategies are vital for success and competitiveness of enterprises. According to survey results, only 1/4 of a total of 183 SMEs (and 15% of agricultural enterprises) formulated their strategy in writing. The organizations managed this way can adapt to changes in the environment. They also can flexibly change their strategy and fight against potential crises. Unfortunately, almost 3/4 of SME (and 85% of agricultural enterprises) managers in the Czech Republic are not yet able to look further into the future to prepare for future crises. The companies without an established strategic management lack the ability to see and manage their distant future actively.

The number of crises in agricultural enterprises with a strategy is lower (about 15%) compared to those that are not engaged in the formulating their strategy. Average importance of crises in both samples is almost the same (3.53, 3.55) so it can be assumed that the strategic control does not affect the significance of the crisis. The following table compares the overall representation of crises in agriculture. It also compares enterprises with and without strategic management in terms of the occurrence of crises.

As the Tab. II shows, strategic management is increasingly faced with crises of a technical nature

I: Selected statistics for agricultural enterprises

Strategically managed	Number	Number in %	Number of crises	Number of crises in %	Average importance of crisis	Maximum value	Minimal value	Standard deviation
YES	5	15%	21	15%	3.53	5	2	0.92
NO	29	85%	122	85%	3.55	5	0	1.07

II: *The types of crises occurring on agricultural enterprises*

Type of crises	Total	Total in %	Not-managed strategically	Not managed strategically in %	Strategically managed	Strategically managed in %
Technical breakdowns	8	6%	5	4%	3	14%
Inputs, Supplies	11	8%	10	8%	1	5%
Employees	17	12%	17	14%	0	0%
Owners	5	3%	5	4%	0	0%
Natural disasters	9	6%	8	7%	1	5%
Processes	5	3%	5	4%	0	0%
Capacity	4	3%	2	2%	2	10%
Selling prices	18	13%	16	13%	2	10%
Customers, demands	17	12%	14	11%	3	14%
Collecting bills	10	7%	10	8%	0	0%
Regulations, bureaucracy	18	13%	12	10%	6	29%
Competition	7	5%	5	4%	2	10%
Others	14	10%	13	11%	1	5%
Total	143	100%	122	100%	21	100%

(14%; 4%) than enterprises without a strategy. Likewise, it is a very significant difference in the incidence of crises associated with red tape and administrative requirements. This crisis is reported by 29% of enterprises with the strategy compared with 10% of enterprises without the strategy. In contrast, companies without strategic management have more crises in the areas of employee's, owner's processes and collecting bills. The other areas of crises reported no significant differences between the samples.

Using the Mann Whitney U test at the significance level of $\alpha = 0.05$, we tested the data, where Y = agricultural enterprises do not use strategic management and X = agricultural enterprises use strategic management. The following hypotheses are tested: $H_0 = x_{0.50} - y_{0.50} = 0$ and $H_A = x_{0.50} > y_{0.50}$.

The Tab. III revealed that both groups in agricultural enterprises are almost identical, regarding the meaning of the crises. The null hypothesis H_0 failed to be rejected because the p-value is equal to 1 and is significantly greater than the selected $\alpha = 0.05$. That is why we continue to say that strategic management has no statistically significant effect on the importance of crisis by the managers. This conclusion is also graphically illustrated in Fig. 1, where both samples are compared. After that, we divided the sample

into five groups based on the OECD classification. The groups were tested by the same statistical method as the whole sample of 183 enterprises. Hypotheses were identical, and the resulting data is shown in Tab. III.

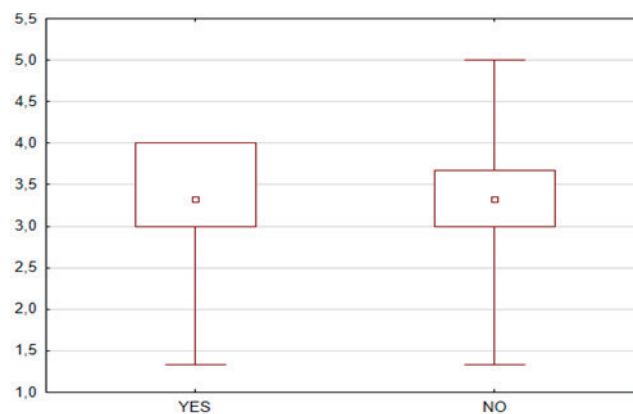
As table 3 revealed, p-value is close to zero in one case only – for B1 group (0.0068). Here, due to a positive value of Z (2.7059) we can say that the enterprises with a strategy evaluated a crisis as more significant, compared to the enterprises that do not have a strategy. In all other cases, we failed to reject the null hypothesis H_0 , as in the main sample. However, a particular relation can also be assumed in other categories, as shown in the following box-plots.

Fig. 1 shows the agricultural enterprises with and without strategy. It is interesting that both groups of enterprises reported a similar level of the median value of 3.4 points, and the minimum value of 1.4 points. The enterprises without strategic management reported greater maximum values at 5.0 points, which is the maximum value for all the sectors, but the middle quantile ranges from 3.0 to 3.5 points. Similarly, 25% – 75% of strategically managed enterprises reported the values at the level of 3.0 to 4.0 points.

Subsequently, the correlation matrix was created for the agricultural enterprises to identify

III: *Mann-Whitney U test for five group based on the OECD classification*

OECD	Strategically managed	Non-strategically managed	U	Z	p-value
A1	66.5	53.5	21.5	-0.5893	0.5557
A2	180.5	284.5	74.5	1.0998	0.2713
B1	296	694	64	2.7059	0.0068
B2	314	1516	236	-0.9517	0.3412
C	87	508	72	0	1



1: Median and interval of data layout in strategically and not strategically managed companies from sector C

various relations between the crises. For greater clarity of the entire correlation analysis the crises in the correlation matrix are expressed by abbreviations, as described in the Tab. IV.

There is also a positive correlation between the quality of production and crises related to customer requirements (31%), where it is seen that clients in these sectors demand quality. Interesting thing is that this relationship is in all other sectors positive as well, but do not reach such high amounts. For example, in sector A2 it is by 16%, in B1 by 2% and in B2 even 1%. Overall correlation among all considered companies is 9%. The most significant positive linkage is the impact of the crisis associated with customer needs and crises associated with low production capacity (37%). Thus a significant relationship was not confirmed in another monitored sector, the relationship is 9% in the total sample. The positive relationship is in sector A2 (8%), whereas in the sectors of services there is negative relationship in B1 (-17%) and B2 (-5%). It is evident that companies involved in services do not have problems with lower capacity towards customer requirements. In agriculture, it is evident that there is a very strong bond between the crises of employees and theft (35%) this relation is also important in terms of the whole sample – see Fig. 2. As already mentioned, there is one of the strongest relationship in all sectors (35%

in B1, 36% in B2), excluding sector A2, in which the relationship is negative (-16%). We can presume that measures preventing theft are implemented in medium-intensive industries, or employees come into contact with such materials and products that are not worth of stealing. In the whole sample employee theft represents strongest positive relation of 25%.

Comparing the strongest positive correlation between agricultural sector and all other sectors we will find out that the most prominent relationship between competition and price is evident in sector A2, 48%. From the viewpoint of agricultural enterprises, it is not so important relationship, as can be seen from the table below (6%). From this we can conclude that agricultural prices are often set independently of competitors. One of the strongest relationships in sector B2 was relationship between the quality of production and price (36%). On the contrary, in agricultural companies there is negative relationship (16%). Similarly, in sector B1 where is the strongest relationship belongs to technical crises and thefts (27%), this relationship is negative in agricultural companies (-16%). As the above examples show, many agricultural enterprises have specifics to corporates both in services and in industry.

There is also a strong positive correlation (28%) among employees and personality crisis of

IV: Used marking of crisis

Type of crisis	Code	Type of crisis	Code
Inputs, Supplies	IS	Natural disasters	ND
Financial capital	FC	Owners	Ow
Competition	Co	Employees	Em
Regulations, bureaucracy	RB	Placement of business	PB
Collecting bills	CB	Outdated product	OP
Customers, demands	CD	Quality of production	QP
Selling prices	SP	Legal form of business	LF
Entrepreneur – personal crisis	En	Thefts	Th
Processes	Pr	Technical breakdowns	TB
Capacity	Ca		

the manager; hence the owner of the enterprise. This positive relationship is very interesting from the viewpoint of the whole research, because it is positive in sector of agriculture only. In all other companies there was demonstrated negative correlation between crises of employees and personality of manager. In the whole sample it is by -2%, in A2 -4%, B1 -6% and B2 -2%. In agriculture, there is a strong linkage between managers and employees, eventually strong reflection of a manager in the field of responsibility for performance of subordinates. It suggests that there is a greater interdependence of relations in the workplace compared to other sectors.

Negative feedback in the agricultural sector appears to be the strongest (-41%) for the crisis related to employees and natural conditions. Similarly as in agricultural enterprises, there is such as negative correlation in all other companies (-19%). From the viewpoint of sectors the strongest correlation is in A2 (-38%), B1 (-7%) and B2 (-10%).

Other significant crises (-39%) are associated with employees and sales prices and sales in a pair of price and customer requirements. Negative relationship of sale prices and employees is analogic in all SMEs, except sector A2, where the relation is relatively strongly positive (+15%), in service sectors B1 and B2 it is -22%. This may be regarded as interesting, if any one of these crises occurs, there is 39% probability that there will not be another. The important links also include technical problem, together with the maturity of receivables (-33%). Analogous results were discovered in all SMEs (-10%). This effect was not so noticeable in sector A2 (-1%) as in other sectors. In sectors B1 and B2, there was a negative relation on the level -4% and -5%. Regulation and bureaucracy have negative bond to maturing debt (-31%), similar strong negative relationship was in sectors A2 (-28%), B1 (-19%) and in sector B2 it has not been demonstrated (0%). For the entire sample of companies, the relationship was on the level of -18%.

	IS	FC	Co	RB	CB	CD	SP	En	Pr	Ca	ND	Ow	Em	PB	QP	Th	TB
IS		1%	-20%	-23%	-3%	-6%	26%	-17%	-6%	-25%	-16%	7%	-23%	-17%	23%	1%	11%
FC	1%		10%	14%	-20%	-31%	18%	-8%	21%	-11%	-14%	-13%	-7%	-8%	-10%	27%	10%
Co	-20%	10%		-1%	-17%	7%	6%	-13%	-19%	4%	-4%	20%	-16%	18%	-16%	10%	10%
RB	-23%	14%	-1%		-31%	6%	13%	3%	23%	23%	5%	-3%	-19%	3%	-7%	-7%	13%
CB	-3%	-20%	-17%	-31%		13%	-26%	-16%	-4%	-4%	-13%	-9%	21%	-16%	25%	3%	-33%
CD	-6%	-31%	7%	6%	13%		-39%	0%	-18%	37%	-15%	25%	6%	0%	31%	-10%	7%
SP	26%	18%	6%	13%	-26%	-39%		-13%	11%	-9%	10%	24%	-39%	-13%	-16%	-5%	-2%
En	-17%	-8%	-13%	3%	-16%	0%	-13%		-9%	-9%	-12%	-10%	28%	-6%	-8%	-8%	-13%
Pr	-6%	21%	-19%	23%	-4%	-18%	11%	-9%		15%	7%	-15%	-14%	-9%	21%	-11%	4%
Ca	-25%	-11%	4%	23%	-4%	37%	-9%	-9%	15%		7%	11%	4%	-9%	21%	-11%	4%
ND	-16%	-14%	-4%	5%	-13%	-15%	10%	-12%	7%	7%		-19%	-41%	-12%	-14%	-14%	-4%
Ow	7%	13%	20%	-3%	-9%	25%	24%	-10%	-15%	11%	-19%		-3%	25%	-13%	16%	-1%
Em	-23%	-7%	-16%	-19%	21%	6%	-39%	28%	-14%	4%	-41%	-3%		3%	14%	35%	-31%
PB	-17%	-8%	18%	3%	-16%	0%	-13%	-6%	-9%	-9%	-12%	25%	3%		-8%	-8%	18%
QP	23%	-10%	-16%	-7%	25%	31%	-16%	-8%	21%	21%	-14%	-13%	14%	-8%		-10%	-16%
Th	1%	27%	10%	-7%	3%	-10%	-5%	-8%	-11%	-11%	-14%	16%	35%	-8%	-10%		-16%
TB	11%	10%	10%	13%	-33%	7%	-2%	-13%	4%	4%	-4%	-1%	-31%	18%	-16%	-16%	

2: Correlation occurrence of crises in agricultural enterprises

CONCLUSION

Successful managers of organizations must have a vision of the future development of their enterprises; preferably a written strategy. As a part of the control system, the managers must be able to formulate their strategy, implement it effectively, and change it if necessary. In the Czech Republic, however, 1/4 of SMEs (15% of agricultural enterprises) only has a written strategy. All SMEs should apply strategic management. They should have a strategy that would adapt to the current situation and future developments as quickly as possible. When designing the strategy, it is important for the managers to detect new opportunities as soon as possible and to be aware of crises that can spoil these opportunities and threaten the functioning of the organization. The conclusion has been confirmed by other authors. Smallman (1996) notes, that there is a need for managers to move from a current dominant reactive paradigm to a proactive, holistic approach to dealing with chaos and change. Proactive planning through the use of strategic planning and issues management will help reduce risk, time wastage, and poor resource management and reduce the impacts of those crises that do arise (as noted by Heath, 1998 and Thompson and Martin, 2010).

A manager should be able to respond flexibly to the changing external and internal conditions. This requires a systematic approach to analyze the environment and to collect and evaluate strategically important information that will enable a manager to design a successful strategy and also to anticipate

crises better. However, crisis managers need to attribute greater importance than the mean value of 3.4 for all the SMEs in the sample (3.5 in agricultural enterprises). The best crisis managers also know what changes are needed in corporate governance, organizational culture, and information technology (as confirmed by Lerbinger, 2012). Authors have not proved in testing hypotheses that there is an influence of strategic management on importance of crises by the agricultural managers. All organizations attach similar importance to the crises.

Strategic management is increasingly confronted with bureaucracy crises. It is connected with the facts that the strategic plans that are created most often because it is a precondition for a subsidy. Getting subsidies, however, is associated with high administration and the possibility of failure to obtain the required amount of funds. Businesses without a defined strategy are facing multiple crises associated with employees. The results of correlation analysis indicate that the agricultural sector has got a very strong link between employee crises and theft (35%) and subordinates' relationships with superiors (28%). The human factor in agriculture plays an important role. However, the written ethical principles are truly respected only by those who follow these principles on their own. Education and understanding of compliance of rights and obligations of the employees is a matter of internal motivation, which is unenforceable (as stated by Cimrmanová, 2015). Fischer and Burton (2014) claim, that European agriculture is experiencing a recruitment crisis that threatens the continuation of both family farming and associated rural communities (Chiswell and Lobley, 2015). There is cause to believe a succession crisis is being experienced in many parts of Europe. The situations in Norway, Finland, France and potentially Germany appear to represent past, current and future major reconfigurations of family farming in Europe associated with succession failure (Burton and Fischer, 2015).

Agricultural enterprises in the Czech Republic also deal with other crises: weather conditions, rising prices of inputs (especially fertilizers and pesticides), an inconsistent position on the market within the European Union, the competitive environment, and especially large unpredictable fluctuations in the prices of agricultural commodities. All these negatives should be offset partly by grant support. For the development and competitiveness of agriculture it is necessary to be actively supported by the state. An integral part of improving competitiveness should be the diversification of activities that reduce existential risk arising from the failure of one of the activities (that notes Agrární komora, 2011).

However, it is surprising that the research failed to demonstrate the influence of a strategy to determine the significance of the crisis by the Wilcoxon test. The test confirmed that the organization with a strategy and those that do not have a defined strategy see the crises as equally important. Enterprises classified by sectors of the national economy into 5 categories reported the same results in 4 categories. Only the enterprises of B1 reported that a written strategy affects the meaning of the crisis. The enterprises with strategic management in group B see the crises as more important (the average of 3.7 points), which is the greatest value of all the other sectors. This sector (including the financial sector, insurance companies or companies dealing with information technology) strongly depends on changes in the economic and technological environment. In recent years, this sector has been affected a lot by the global economic crisis. Crises are seen by the managers of these organizations as a threat of possible closure of their enterprise. So, they started to manage their enterprise by the principles of strategic management, establish long-term goals and identify possible crisis. And those who manage their enterprise with a written strategy can better perceive any crises. They have been prepared.

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REFERENCES

- AGRÁRNÍ KOMORA ČESKÉ REPUBLIKY. 2011. *Priority 2: Strengthening competitiveness* [in Czech: *Priorita 2. posílení konkurenceschopnosti*]. [Online]. Available at: http://www.apic-ak.cz/data_ak/12/d/AnKonkSchopUvod.pdf [Accessed: 2016 October 12].
- AMBROSINI, V. and BOWMAN, C. 2009. What are dynamic capabilities and are they a useful construct in strategic management? *International Journal of Management Reviews*, 11(1): 29–49.
- ANDREWS, K.R. 1971. *The Concept of Corporate Strategy*. New York: Dow Jones-Irwin.
- BABBIE, E., 2009. *The practice of social research*. Belmont, CA: Wadsworth Publishing.
- BLAETTEL-MINK, B., BODDENBERG, M., GUNKEL, L. et al. 2017. Beyond the market new practices of supply in times of crisis: The example community-supporter agriculture. *International Journal of Consumer Studies*, 41(4): 415–421.
- BOOTH, S. A. 2015. *Crisis management strategy: competition and change in modern enterprises*. 1st Edition. Routledge.
- BRELIK, A., 2013. Agro tourism as public good in rural areas: A case study. *European Research Studies Journal*, 16(1): 67–74.

- BUDÍKOVÁ, M. and KRÁLOVÁ, M. 2010. *Guide to basic statistical methods* [in Czech: *Průvodce základními statistickými metodami*]. Praha: Grada.
- BURTON, R. J. F. and FISCHER, H. 2015. The Succession Crisis in European Agriculture. *Sociologia Ruralis*, 55(2): 155–166.
- CAFIERO, C., CAPITANIO, F., CIOFFI, A. and COPPOLA, A. 2007. Risk and Crisis Management in the Reformed European Agricultural Policy. *Canadian Journal of Agricultural Economics*, 55: 419–441.
- CANENBLEY, C., FEINDT, P. H., GOTTSCHICK, M., MÜLLER, C. and ROEDENBECK, I. 2004. *Landwirtschaft zwischen Politik, Umwelt, Gesellschaft und Markt. Problemwahrnehmungen von LandwirtInnen, agrarpolitischen Akteuren, Umweltwissenschaften und im Zusammenhang mit der Koexistenz gentechnischer, konventioneller und ökologischer Landwirtschaft*. BIOGUM-Forschungsbericht Nr.10. Hamburg: Universität Hamburg.
- CIMRMANNOVÁ, T. et al. 2015. *Crisis and the importance of helping first contact* [in Czech: *Krise a význam pomáhajících prvního kontaktu*]. Praha: Karolinum.
- COOMGS, W.T. 2004. Impact of past crises on current crisis communication. *Journal of Business Communication*, 41: 265–289.
- FERJENČÍK, J. 2000. *Introduction to methodology of psychological research* [in Czech: *Úvod do metodologie psychologického výzkumu*]. Praha: Portál.
- FIALOVÁ, H. and FIALA, J. 2006. *Malý ekonomický slovník s výkladem pojmů v češtině a v angličtině*. Praha: A plus.
- FISCHER, H. and BURTON, R. J. F. 2014 Understanding farm succession as socially constructed endogenous cycles. *Sociologia Ruralis*, 54(4): 417–438.
- FREEMAN, R. E. 2010. *Strategic management: A Stakeholder approach*. Cambridge university press.
- FREUND, R. J. and WILSON, W. J. 2010. *Statistical methods*. Boston: Elsevier.
- FRIEDRICH, V. and MAJOVSKÁ, R. 2010. *Selection of economic statistics*. [in Czech: *Výběr ekonomické statistiky*]. Praha: Wolters Kluwer Česká republika.
- GONZALES-HERRERO, A. and PRATT, C. 1998. Marketing crises in tourism: Communication strategies in the United States and Spain. *Public Relations Review*, 24(1): 83–97.
- GREGA, L. 2004. *Theoretical and methodological aspects of the assessment of the competitiveness of agriculture* [in Czech: *Teoreticko metodologické aspekty posuzování konkurenceschopnosti zemědělství*]. Brno: MZLU.
- HEATH, R. 1998. *Crisis management for managers and executives*. London: Financial Times Management.
- HRABÁNKOVÁ, M., ROLÍNEK, L., ŘEHOŘ, P. and ČERMÁKOVÁ, A. 2008. *Approaches to harmonize the European model of agriculture in terms of regions of the Czech Republic* [in Czech: *Přístupy k harmonizaci Evropského modelu zemědělství na podmínky regionů ČR*]. České Budějovice: Jihočeská univerzita v Českých Budějovicích. Ekonomická fakulta.
- CHISWELL, H. M. and LOBLEY, M. 2015. A Recruitment Crisis in Agriculture? *Sociologia Ruralis*, 55(2): 150–154.
- CHLÁDKOVÁ, H. and FORMÁNKOVÁ, S. 2016. Strategy for SMEs in the area of primary agricultural production. *Agricultural Economics*, 62(9): 395–406.
- JOHNSON, G. and SCHOLLES, K. 1993. *Exploring corporate strategy*. Oxford: Butterworth-Heinemann.
- KASH, T. J. and DARLING, J. 1998. Crisis management: Prevention, diagnosis and intervention. *Leadership & Organization Development Journal*, 19(4): 179–186.
- KEOWN-MCMULLAN, J. 1997. Crisis: When does a molehill become a mountain? *Disaster Prevention and Management*, 6(1): 4–10.
- LERBINGER, O. 2012. *The crisis manager*. Routledge.
- MELOUN, M. and MILITKÝ, J. 2002. *Compendium of statistical data processing* [in Czech: *Kompendium statistického zpracování dat*]. Praha: Academia.
- MZE, MINISTERSTVO ZEMĚDĚLSTVÍ ČR. 2006. *The national strategic plan of rural development for 2007–2013* [in Czech: *Národní strategický plán rozvoje venkova ČR na období 2007–2013*]. Praha: MZE ČR.
- NOVOTNA, M. and VOLEK, T. 2016. The significance of farm size in the evaluation of labour productivity in agriculture. *Acta Universitatis Agriculturae et Silviculturae Mendelianae Brunensis*, 64(1): 333–340.
- OECD. 2014. *Eurostat indicators on High-tech industry and Knowledge - intensive services*. Annex 3 – High-tech aggregation by NACE Rev. 2. [Online]. Available: http://ec.europa.eu/eurostat/cache/metadata/Annexes/htec_esms_an3.pdf [Accessed: 2016, November 17].
- PORTER, M. E. 1996. What is Strategy? *Harvard Business Review*, 74(6): 61–78.
- PÝCHA, M. 2015. *The present and future of Czech agriculture* [in Czech: *Současnost a budoucnost českého zemědělství*]. [Online]. Available at: http://www.szescaslav.cz/wp-content/uploads/2015/04/soucasnost_zemedelstvi.pdf [Accessed: 2016, November 17].
- RAIS, R. 2007. *Specifika krizového managementu*. Ostrava: Key Publishing.
- RITCHIE, B. W. 2004. Chaos, crises and disasters: a strategic approach to crisis management in the tourism industry. *Tourism management*, 25(6): 669–683.
- ŘEHOŘ, P. 2016. *Řízení změn*. České Budějovice: Ekonomická fakulta, Jihočeská univerzita v Českých Budějovicích.
- SMALLMAN, C. 1996. Challenging the orthodoxy in risk management. *Safety Science*, 22(1–3): 245–262.

- SPRINGER, C. G. 2008. Strategic management of crises. *PA Times*, 31(7). [Online]. Available at: http://digitalscholarship.unlv.edu/sea_fac_articles/333 [Accessed: 2016, November 17].
- ŠTURCOVÁ, J. 2010. Crisis management in agriculture [in Czech: Krizové řízení v zemědělství]. In: *Proceedings of International Scientific Conference on Hradec Ecconomical Days 2010*. Hradec Králové: Gaudeamus, pp. 167–169.
- ŠVÁROVÁ, M. and VRCHOTA, J. 2013. Strategic management in micro, small and medium-sized businesses in relation to financial success of the enterprise. *Acta Universitatis Agriculturae et Silviculturae Mendelianae Brunensis*, 61(7): 2859–2866.
- ŠVÁROVÁ, M. and VRCHOTA, J. 2014. Influence of competitive advantage on formulation business strategy. In: *Enterprise and Competitive Environment, 17th International Conference*. March 6–7, Brno, Czech Republic.
- THOMPSON, J. L. and MARTIN, F. 2010. *Strategic management. Awareness and change*. South-Western publishing.
- TOMÁŠKOVÁ, E. 2008. *Czech agriculture in European integration* [in Czech: České zemědělství v rámci evropské integrace]. [Online]. Available at: https://www.law.muni.cz/sborniky/cofola2008/files/pdf/ekonom/Tomaskova_Eva.pdf [Accessed: 2016, December 12].
- ÚSTAV ZEMĚDĚLSKÉ EKONOMIKY A INFORMACÍ. 2010. *Czech agriculture, six years after joining the European Union* [in Czech: Czech Agriculture Six Years after EU Accession]. Výzkumná studie. [Online]. Available at: http://www.uzei.cz/data/usr_001_cz_soubory/studie103.pdf [Accessed: 2016, October 25].
- VARGO, J. and SEVILLE, E. 2011. Crisis strategic planning for SMEs: finding the silver lining. *International Journal of Production Research*, 49(18): 5619–5635.

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