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# CORPORATE CULTURE IN SMALL AND MEDIUM-SIZED ENTERPRISES OF FORESTRY AND FOREST-BASED INDUSTRY IS DIFFERENT

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# **ABSTRACT**

The development of economies, globalization and the related economic changes require a radical turn in the thinking of all employees of the enterprise. Corporate culture provides an opportunity to achieve a competitive advantage. Using an Organizational Culture Assessment Instrument, corporate culture in small and medium-sized enterprises of forestry and forest-based industry operating in Slovakia is defined. The research outcomes confirm that, in the small enterprises of forestry and forest-based industry, clan corporate culture characterized by family atmosphere and friendly working environment is applied. On the other hand, medium-sized enterprises are characterized by a hierarchy corporate culture emphasizing compliance with core values following the regulations and order. In the strategic perspective of the following 5 to 10 years, in small and medium-sized enterprises, the clan corporate culture should be applied. As a result of the presented research, the values typical for clan corporate culture are recommended being applied to the analyzed type of enterprises. If the enterprise management can focus on internal cohesion and joint achievements of goals, the enterprise will also achieve higher performance resulting in financial success and ultimately gain a competitive advantage.

**Key words**: Small and medium-sized enterprises, forestry and forest-based industry, corporate culture, Organizational Culture Assessment Instrument, Tukey's HSD test.

# INTRODUCTION

Small and medium-sized enterprises are considered a key to each country's economy. Not only they make a significant contribution to gross domestic product, they also increase innovation, flexibly introduce new products, help to create jobs and maintain the existing ones and significantly contribute to the overall enterprise growth (SEDLIAČKOVÁ *et al.* 2020, CERVENKA *et al.* 2016, STACHO – STACHOVA 2015). However, business activities of small and medium-sized enterprises are influenced by growing globalization putting pressure on enterprises in order to create effective strategies to succeed in a highly competitive environment (Busse – Greguš 2020, Moresova *et al.* 2020, Al-Tkhayneh *et al.* 2019, Anyakoha 2019; Stacho *et al.* 2019, Ďuriš *et al.* 2018, Loucanova *et al.* 2018, Lašáková *et al.* 2017, Nemec *et al.* 2017, Nedeliakova – Panak 2015, Stachova 2012). Therefore, in recent years, more and more attention has been paid to the fact that, to a large extent, success of an enterprise depends on its values, standards, rules, patterns of behavior and rituals, i.e. on "corporate culture". The main reason why a strong emphasis should be

put on corporate culture is the fact that many researches understand it as a very important factor in the process of successful enterprise operation, and also as a significant element of corporate organization (MULLAKHMETOV *et al.* 2019, VLAICU *et al.* 2019, MATRAEVA *et al.* 2018, REZAEI *et al.* 2016, OGBONNA – HARRIS 2000).

The objective of the research is the corporate culture analyzed via the forestry and forest-based industry including the forest, wood processing, furniture manufacturing enterprises and the enterprises related to pulp and paper-processing industry. In terms of sectoral structure of enterprises in Slovakia, the aforementioned enterprises can be considered significant, because of their high potential. Their strategic importance is proved by the fact that many enterprises in the wood processing industry operating in Slovakia have experienced very dynamic growth (PALUS *et al.* 2019). Over the last three years, the revenues of these enterprises have increased by a third and labor productivity has increased by 12% (MARKO 2019). Forest enterprises account for 0.33% of the gross domestic product of the Slovak Republic. There are approximately 1,200 to 1,300 enterprises in forestry, with revenues ranging from 220 to 240 million € (SUJOVÁ – KOVALČÍK 2017, ZELENÁ SPRÁVA 2017, PALUŠ *et al.* 2011). Furniture manufacturing enterprises are financially attractive as well. In 2018, they achieved record sales. Very good indicators were also achieved by pulp and paper-processing enterpripses; their sales reached almost 1.4 billion € and a profit of 125 million € (MARKO 2019).

With regards to the aforementioned importance of small and medium-sized enterprises, the aim of the research is to define the corporate culture in small and medium-sized enterprises of forestry and forest-based industry in Slovakia and to propose recommendations for the most suitable "corporate culture" corresponding with the size of the enterprise.

# LITERATURE REVIEW

Corporate culture is a system of accepted values and opinions creating positive informal norms of behavior in enterprises. It is a certain (intangible) product resulting from employees' thinking and the activities performed. Corporate culture incorporates a multiplicity of shared employee beliefs, values, behaviors, and symbols; therefore, it has a significant impact on individual decisions and group actions (LIZBETINOVA et al. 2016, BELIAS et al. 2015). It represents the value of an identity and a common corporate spirit for each employee, whether we examine it in private or public sector (DRDLA – Rais 2001). Regardless of its size, form, focus and other factors, each enterprise has its own specific, original and unique type of corporate culture distinguishing it from the corporate cultures of other enterprises (GUISO et al. 2015, KACHAŇÁKOVÁ 2010). Even an enterprise running on the market for one year has already started to create its cultural history (JAVORČÍKOVÁ – Dove 2019, JAVORČÍKOVÁ et al. 2019, FAIRFIELD-SONN 2001). Cultural history reflects the ideas of the enterprise founders (owners) about the existence, success, career, remuneration system, and so on, which are later translated into a particular type of corporate culture. The sources of these ideas create the basis of the follow-up pattern of ideas common to all employees in certain situations, which manifests itself in the general approach to managers, employees, customers, and so on.

The existing typologies define typical contents of corporate culture from various perspectives. HANDY (1985) and HARRISON (1972) defined corporate culture from the analytical point of view. PFEIFER and UMLAUFOVÁ (1993) and DEAL and KENNEDY (1982) in the context of examining corporate culture, analyzed the degree of risk of the business objects and market feedback. KACHAŇÁKOVÁ *et al.* (1997) on the other hand, defined the

corporate culture in relation to the dominant orientation of the enterprise during changes and life-phases of the enterprise. BOWETT (2006) discussed the enterprise's possibilities for change. In addition to these typologies, there are numbers of other approaches (MCNAMARA 2006, SONNENFELD 1988, VRIES - MILLER 1984, MILES et al. 1978, and others), mapping the complex content of an enterprise's social environment and make it possible to distinguish and understand the basic characteristics differentiating the businesses. Generally, the vast majority of typologies quite often examine corporate culture from a psychological point of view. However, CAMERON and QUINN (2006) examine corporate culture from a different perspective. The authors focus on the link between the perception of corporate culture and enterprise's outputs, for example, general efficiency of the enterprise. This is the most complex typology and at the same time, one of the most influential and widespread typologies in the present-day corporate culture research (VALENCIA et al. 2016). It identifies the content of corporate culture not only in relation to the degree of flexibility and control but also to the degree of internal and external environment (CAMERON - QUINN 2006, CAMERON - QUINN 1999, QUINN -ROHRBAUGH 1983).

Assessing corporate culture based on the methodology of CAMERON and QUINN (2006, 1999) through the Organizational Culture Assessment Instrument (OCAI), makes possible to diagnose corporate culture by examining core values, shared assumptions and common approaches to work. Such approach represents a classification approach to culture (LIM 1995), designed to identify the existing and desired corporate culture. It is based on the model of competitive values of the enterprise developed to measure corporate culture (DI STEFANO – SCRIMA 2016). The model of competitive values of the enterprise was created on the basis of a research focused on the 39 most important indicators affecting the efficiency of the enterprise (CAMERON - QUINN 2006, CAMPBELL 2004). QUINN and ROHRBAUGH (1983) subjected this list to a statistical analysis that highlighted two basic dimensions containing four important groups of indicators. The first dimension distinguishes between efficiency criteria emphasizing flexibility, freedom of decisionmaking and dynamism, and criteria emphasizing stability, order and control. The second dimension distinguishes between efficiency criteria emphasizing internal orientation, integration and compliance with criteria emphasizing external orientation, differentiation and competition. By combining the two dimensions, four quadrants were generated, each of which integrates a different set of enterprise's effectivity indicators representing employees' values related to enterprise's efficiency. For example, an externally oriented enterprise is mostly market-driven, oriented towards new customers and competition. On the other hand, an internally focused enterprise deals with the attitude of employees and the ways in which work is to be performed. The OCAI allows to diagnose the dominant direction of the enterprise and at the same time determines the type, strength and congruence of the prevailing culture, namely clan corporate culture, adhocracy corporate culture, market corporate culture and hierarchy corporate culture.

# EXPERIMENTAL PART

Employees working in small and medium-sized enterprises of the forestry and forest-based industry over the period 2016 to 2019 were contacted by the random sampling method. For setting the minimal scope of the sample, Cochran's formula (setting the ideal sample size related to the required level of precision, reliability and estimated proportion of the attribute present in the population) was used as follows:

$$n_0 = \frac{Z^2 pq}{e^2} \tag{1}$$

where:

z – critical value corresponding to the selected reliability of the estimate,

p – preliminary estimate of the relative abundance,

q – represents 1 – p,

e – selected error of the estimate.

At the selected 95% reliability, accuracy of at least 5% and a critical value corresponding to the chosen reliability of the estimate at the level of 1.96, minimum sample size of 385 respondents represents the sampling unit.

$$n_0 = \frac{Z^2 pq}{e^2} = \frac{(1.96)^2 (0.5)(0.5)}{(0.05)^2} = 385$$
 (2)

Consequently, for the aimed reliability (95%) and accuracy (5%) of the research results evaluation, answers from 385 respondents were sufficient to generalize the results.

A total of 3,402 employees working in the small and medium-sized enterprises in the forestry and forest-based industry (composition is shown in Table 1) were involved in the research, which, given the conventions used in our research, met the criterion of the minimum size of the sampling unit.

Tab. 1 Sampling	unit	composition.
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Size of enterprises	Multiplicity	2016	2017	2018	2019	Total
	Multiplicity	417	400	403	450	1,670
Small-sized	Line multiplicity	24.97%	23.95%	24.13%	26.95%	24.64%
	Total multiplicity	2.97%	2.85%	2.87%	3.21%	11.91%
	Multiplicity	420	461	441	410	1,732
Medium-sized	Line multiplicity	24.25%	26.62%	25.46%	23.67%	23.91%
	Total multiplicity	3.00%	3.29%	3.15%	2.92%	12.35%
	Multiplicity	837	861	844	860	3,402
Sum	Line multiplicity	24.60%	25.31%	24.81%	25.28%	100.00%
	Total multiplicity	5.97%	6.14%	6.02%	6.13%	24.26%

The questionnaire as a social research method was used as the main research method. The questionnaire consisted of two parts. In the first part, the respondents provided information about the enterprise identification data. The second part of the questionnaire was based on the model of competitive values of the enterprise and the resulting OCAI methodology, where the two basic dimensions of the model represent flexibility versus control and the degree of internal and versus external focus. Their combination generated four types of cultures: clan corporate culture, adhocracy corporate culture, market corporate culture and hierarchy corporate culture. The content of the corporate culture was defined in a total of six dimensions (such as dominant characteristics, organizational leadership, management of employees, organization glue, strategic emphases and criteria of success). Each of the six dimensions was examined by four alternatives: alternative A, alternative B, alternative C and alternative D. Alternative A corresponds to the clan corporate culture. Alternative B corresponds to an adhocracy corporate culture. Alternative C corresponds to a market corporate culture and alternative D corresponds to a hierarchy corporate culture.

The respondents' task was to divide 100 points between the four alternatives based on the extent to which individual statements described the enterprise they work for (referring to the enterprise's current level). Subsequently, the task of the respondents was to distribute 100 points depending on what the enterprise should look like in 5 to 10 years (referring to the enterprise's required level) (CAMERON – QUINN 2006).

The methodology of CAMERON and QUINN (2006, 1999) further assumes that in the final phase, the average values of the individual alternatives from all six dimensions are added and the overall average is defined. The final output is a type of corporate culture providing an overview of the basic assumptions and values applied in the enterprise that characterize it (BREMER 2017, CAMERON – QUINN 2006).

The results of the research were further processed by mathematical-statistical methods using statistical software RStudio. The current and required level of corporate culture in small and medium-sized enterprises of the forestry and forest-based industry was defined by means of an estimated average using the Beta regression method. The significance of differences in corporate culture was tested by inductive statistical methods. Interval estimates and Tukey's HSD test allowing multiple comparisons were used. The common 5% level of significance of the test was used. Differences were interpreted as statistically significant if the p-value<0.05. The following hypotheses were tested:

- H1: Are there differences in the current level of individual dimensions of corporate culture in small and medium-sized enterprises in the forestry and forest-based industry?
- H2: Are there differences in the current level of corporate culture in small and medium-sized enterprises in the forestry and forest-based industry?
- H3: Are there differences in the required level of individual dimensions of corporate culture in small and medium-sized enterprises in the forestry and forest-based industry?
- H4: Are there differences in the required level of corporate culture in small and medium-sized enterprises in the forestry and forest-based industry?

# **RESULTS AND DISCUSSION**

The results in the first analyzed area in the current level of individual dimensions of corporate culture in small and medium-sized enterprises in the forestry and forest-based industry are presented in Table 2.

The results of dominant characteristics show that, in small enterprises in the forestry and forest-based industry, the highest rating was achieved by alternative A ( $\hat{X}$ =0.331). Small enterprises are characterized by their friendly work environment whereas alternative D ( $\hat{X}$ =0.348) is characteristic for medium-sized enterprises. Medium-sized enterprises are characterized as controlled and structured places. When testing the alternatives with the highest evaluation in the dimension of dominant characteristics in small and medium-sized enterprises of the forestry and forest-based industry, statistically significant differences were confirmed (alternative A, p-value<0.0001; alternative D; p-value<0.0001).

The organizational leadership of small and medium-sized enterprises is characterized by alternative D (small enterprises  $\hat{X}$ =0.318; medium-sized enterprises  $\hat{X}$ =0.340). Enterprises focus on ensuring the smooth running of business organization based on cooperation. The differences were not confirmed (p-value=0.0736).

In the dimension of management of employees, alternative A achieved the highest rating (small enterprises  $\hat{X}$ =0.403; medium-sized enterprises  $\hat{X}$ =0.337). Management of employees is focused primarily on teamwork and cooperation. Although the two groups of respondents agreed, the test confirmed that there are differences in the management of employees of small and medium-sized enterprises of the forestry and forest-based industry in alternative A (p-value<0.0001).

Employees of small enterprises in the forestry and forest-based industry are united by loyalty, mutual trust and dedication to the enterprise. Alternative A currently prevails in the

dimension of organization glue ( $\hat{X}$ =0.328). Formal rules and policies are crucial for mediumsized enterprises, which will ensure the smooth running of business processes. Alternative D ( $\hat{X}$ =0.328) was applied. The test confirmed the existence of differences in alternative A (p-value<0.0001) and alternative D (p-value<0.0001).

The values typical for alternative A ( $\hat{X}$ =0.342) are applied in the strategies of small enterprises in the forestry and forest-based industry. Human development, trust, openness and loyalty in cooperation are emphasized in these enterprises. Medium-sized enterprises are characterized by alternative D ( $\hat{X}$ =0.348). The strategies of these enterprises are based on stability, performance, control and operability. When testing both alternatives, statistically significant differences (p-value<0.0001) were confirmed.

Tab. 2 The current level of individual dimensions of corporate culture in small and medium-sized enterprises in the forestry and forest-based industry.

Dimension	Alternative	Size of enterprise	emmean	SE	asymp. LCL	asymp. UCL	Estimate	SE	z-ratio	p-value
		Small-sized	0.331	0.00554	0.320	0.342				
Criteria of Success Strategic Emphases Organization Glue Employees Leadership Characteristics emphases Dominant Employees Characteristics organization	A	Medium-sized	0.274	0.00496	0.264	0.284	0.05706	0.00737	7.745	< 0.0001
nt stic	D	Small-sized	0.215	0.00437	0.207	0.224	0.02260	0.00577	4.000	0.0011
inai	В	Medium-sized	0.192	0.00398	0.184	0.199	0.02360	0.00577	4.089	0.0011
omi	С	Small-sized	0.258	0.00489	0.249	0.268	-0.00214	0.00677	-0.316	1.0000
D	C	Medium-sized	0.260	0.00482	0.251	0.270	-0.00214	0.00077	-0.310	1.0000
	D	Small-sized	0.284	0.00515	0.274	0.295	-0.06321	0.00751	-8.416	< 0.0001
		Medium-sized	0.348	0.00555	0.337	0.359	0.00321	0.00751	0.110	X0.0001
	A	Small-sized	0.291	0.00526	0.281	0.302	0.03348	0.00706	4.745	0.0001
lal		Medium-sized	0.258	0.00484	0.248	0.267				
ship B	В	Small-sized	0.279	0.00514	0.269	0.289	0.04742	0.00675	7.023	< 0.0001
izat		Medium-sized	0.231	0.00453	0.222	0.240				
gan	C	Small-sized	0.214	0.00439	0.206	0.223	-0.00785	0.00610	-1.288	0.9036
Org L		Medium-sized Small-sized	0.222 0.318	0.00442 0.00549	0.213	0.231 0.329				$\vdash$
	D	Medium-sized	0.340	0.00549	0.307	0.329	-0.02245	0.00775	-2.895	0.0736
		Small-sized	0.403	0.00533	0.329	0.331				
	A	Medium-sized	0.403	0.00540	0.392	0.413	0.065899	0.00792	8.317	< 0.0001
t of		Small-sized	0.220	0.00340	0.327	0.228				
nen	В	Medium-sized	0.220	0.00438	0.193	0.228	0.018569	0.00585	3.175 -2.312	0.0323
zen olo		Small-sized	0.201	0.00396	0.193	0.209				
nag 3mp	C	Medium-sized	0.189	0.00390	0.194	0.197	-0.012820	0.00554		0.2865
Ma	D	Small-sized	0.202	0.00407	0.194	0.210		0.00710	-3.034	
		Medium-sized	0.278	0.00502	0.208	0.288	-0.021535			0.0496
		Small-sized	0.300	0.00512	0.290	0.310				
ē	Α	Medium-sized	0.259	0.00349	0.250	0.268	0.069249	0.00721	9.604	<0.0001
Gl <sub>u</sub>		Small-sized	0.236	0.00473	0.227	0.245				
on	В	Medium-sized	0.200	0.00408	0.192	0.208			5.924	
cati		Small-sized	0.259	0.00487	0.249	0.268			-1.675	0.7037
ınız	C	Medium-sized	0.270	0.00490	0.260	0.280	-0.011412	0.00681		
)rga	rga	Small-sized	0.273	0.00501	0.263	0.283				< 0.0001
0	D	Medium-sized	0.348	0.00552	0.337	0.358	-0.074843	0.00740	-10.120	
		Small-sized	0.342	0.00559	0.331	0.353				
S	A						0.08069	0.00731	11.038	< 0.0001
ase		Medium-sized	0.261	0.00481	0.252	0.270				
ηdι	В	Small-sized	0.244	0.00472	0.235	0.254	0.03103	0.00624	4.972	< 0.0001
En		Medium-sized	0.213	0.00426	0.205	0.222				
gic	С	Small-sized	0.241	0.00467	0.231	0.250	-0.00779	0.00651	-1.198	0.9328
ate		Medium-sized	0.248	0.00468	0.239	0.257	0.00777	0.00031	1.170	0.7520
Str	D	Small-sized	0.274	0.00503	0.264	0.284	-0.07808	0.00742	-10.505	.0.0001
	D	Medium-sized	0.352	0.00555	0.341	0.363	-0.07808	0.00743	-10.303	< 0.0001
		Small-sized	0.381	0.00605	0.369	0.392	0.05555	0.00012	0.000	0.0004
SS	A	Medium-sized	0.315	0.00550	0.304	0.326	0.06565	0.00813	8.080	< 0.0001
Sce		Small-sized	0.248	0.00491	0.238	0.257				<0.0001
Suc	В	Medium-sized	0.207	0.00429	0.198	0.215	0.04094	0.00639	6.411	
of		Small-sized	0.228	0.00429	0.219	0.237				
ria	C		0.228				0.00632	0.00633	0.998	0.9749
rite		Medium-sized		0.00449	0.213	0.230				
	D	Small-sized	0.268	0.00514	0.258	0.278	-0.08464	0.00766	-11.045	< 0.0001
		Medium-sized	0.353	0.00577	0.341	0.364		3.007.00	11.0.13	.0.0001

The success of small businesses in the forestry and forest-based industry is associated with the development of human resources and teamwork. Alternative A ( $\hat{X}$ =0.381) achieved the highest rating. On the other hand, in medium-sized enterprises, performance and low-cost production are the criteria for success. Alternative D ( $\hat{X}$ =0.353) is predominant. When testing alternative A (p-value<0.0001) and alternative D (p-value<0.0001), the test confirmed the existence of differences in small and medium-sized enterprises in the forestry and forest-based industry in both analyzed areas.

Based on the results presented in Table 3, it can be stated that in small enterprises of the forestry and forest-based industry, a clan corporate culture ( $\hat{X}$ =0.327) is currently applied, the enterprise is perceived as a family. For medium-sized enterprises, a hierarchy corporate culture is typical ( $\hat{X}$ =0.331). It is typical for its formalized and structured work environment. The existence of differences between the two types of corporate culture examined (p-value<0.0001) was confirmed.

Tab. 3 The current level of corporate culture in small and medium-sized enterprises in the forestry and forest-based industry.

Type of corporate culture	Size of enterprise	emmean	SE	asymp. LCL	asymp. UCL	Estimate	SE	z-ratio	p-value
Clan	Small-sized	0.327	0.00325	0.320	0.333	0.06009	0.00440	13.672	<0.0001
Cian	Medium-sized	0.267	0.00297	0.261	0.272	0.06009	0.00440		
A 41	Small-sized	0.213	0.00275	0.207	0.218	0.03701	0.00367	10.079	<0.0001
Adhocracy	Medium-sized	0.176	0.00247	0.171	0.180	0.03701			
Montrot	Small-sized	0.214	0.00276	0.209	0.220	0.01217	0.00390	-3.373	0.0170
Market	Medium-sized	0.227	0.00279	0.222	0.233	-0.01317	0.00390		0.0170
Hierarchy	Small-sized	0.270	0.00305	0.264	0.276	-0.06020	0.00441	-13.651	< 0.0001
	Medium-sized	0.331	0.00320	0.324	0.337	-0.00020	0.00441		<0.0001

In the next step, the required level of individual dimensions of corporate culture in small and medium-sized enterprises in the forestry and forest-based industry in the strategic level of 5 to 10 years was examined. The results presented in Table 4.

The results presented in Table 4 how that in the dimension of the dominant characteristics, alternative A is preferred, which understands the enterprise as a multi-member family (small enterprises,  $\hat{X}$ =0.364; medium-sized enterprises,  $\hat{X}$ =0.337). The existence of differences in small and medium-sized enterprises of the forestry and forest-based industry (p-value=0.0018) was confirmed.

In the dimension of organizational leadership, alternative A ( $\hat{X}$ =0.325) should be applied in small enterprises. At the strategic level of 5 to 10 years, managers should be perceived as mentors. Alternative D ( $\hat{X}$ =0.360) considering management as a demonstration of cooperative, organized and smooth performance should be applied in medium-sized enterprises, at the strategic level of 5 to 10 years. When examining the differences in the alternatives with the highest score achieved, the differences in alternative A (p-value=0.0278) and alternative D (p-value<0.0001) were confirmed by the test.

Another analyzed dimension was the required level of management of employees in small and medium-sized enterprises of the forestry and forest-based industry. The most preferred alternative was alternative A. It was proven by the analysis that management of employees should focus on teamwork and collaboration (small enterprises,  $\hat{X}$ =0.450; medium-sized enterprises,  $\hat{X}$ =0.439). The existence of differences in alternative A (p-value=0.8674) were not confirmed.

Tab. 4 The required level of individual dimensions of corporate culture in small and medium-sized enterprises in the forestry and forest-based industry.

Dimension	Alternative	Size of enterprise	emmean	SE	asymp. LCL	asymp. UCL	Estimate	SE	z-ratio	p-value
		Small-sized	0.385	0.00587	0.373	0.396	0.02214	0.00000	2.070	0.0010
Dominant Characteristics	A	Medium-sized	0.353	0.00560	0.342	0.364	0.03214	0.00808	3.978	0.0018
tics	D	Small-sized	0.218	0.00442	0.210	0.227	0.00972	0.00598	1 625	0.7354
eris	В	Medium-sized	0.209	0.00422	0.200	0.217	0.00972		1.625	
Dominant	G	Small-sized	0.253	0.00485	0.244	0.263	0.01212	0.00670	1.022	0.5289
That D	С	Medium-sized	0.267	0.00490	0.257	0.276	-0.01312	0.00679	-1.932	
	D	Small-sized	0.241	0.00471	0.232	0.251	0.00715	0.00655	1.002	0.0597
	D	Medium-sized	0.249	0.00471	0.239	0.258	-0.00715	0.00655	-1.092	0.9587
	۸	Small-sized	0.325	0.00560	0.314	0.336	0.02463	0.00764	3.223	0.0279
_	A	Medium-sized	0.300	0.00530	0.290	0.311	0.02403	0.00764	3.223	0.0278
Organizational Leadership	В	Small-sized	0.288	0.00528	0.278	0.298	0.03854	0.00703	5.482	< 0.0001
rganizationa Leadership	Б	Medium-sized	0.250	0.00479	0.240	0.259	0.03634	0.00703	3.462	<0.0001
aniz	С	Small-sized	0.178	0.00388	0.170	0.185	0.01097	0.00515	2.129	0.3961
)rg.	C	Medium-sized	0.167	0.00364	0.159	0.174	0.01097	0.00313	2.129	0.3901
	D	Small-sized	0.305	0.00544	0.295	0.316	0.05495	0.00795	6.002	< 0.0001
	D	Medium-sized	0.360	0.00574	0.349	0.371	-0.05485	0.00785	-6.983	<0.0001
	۸	Small-sized	0.450	0.00602	0.439	0.462	0.0116	0.00842	1 270	0.8674
4	A	Medium-sized	0.439	0.00589	0.427	0.450	0.0116	0.00642	1.378	0.8074
o it o	D	Small-sized	0.214	0.00433	0.205	0.222	0.0242	0.00571	4.266	0.0005
mei	В	Medium-sized	0.189	0.00393	0.182	0.197	0.0243		4.200	0.0005
Management of Employees	С	Small-sized	0.160	0.00354	0.153	0.167	0.0113	0.00467	2.417	0.2227
Aan Er	C	Medium-sized	0.149	0.00330	0.142	0.155	0.0113		2.417	0.2327
4	D	Small-sized	0.281	0.00509	0.272	0.291	-0.0217		-3.011	0.0530
	Ъ	Medium-sized	0.303	0.00519	0.293	0.313	-0.0217		-5.011	0.0550
	A	Small-sized	0.392	0.00579	0.380	0.403	0.043908	0.00793	5.537	<0.0001
ne		Medium-sized	0.348	0.00546	0.337	0.359				
Organization Glue	В	Small-sized	0.231	0.00451	0.222	0.240	0.002455	0.00619	0.396	0.9999
tioi	ь	Medium-sized	0.228	0.00441	0.220	0.237	0.002433			0.2222
iza	С	Small-sized	0.246	0.00469	0.236	0.255	-0.006940	0.00652	-1.064	0.9641
rgai		Medium-sized	0.253	0.00468	0.243	0.262	-0.000740	0.00032	-1.004	0.9641
Ō	D	Small-sized	0.229	0.00449	0.220	0.238	-0.027551	0.00641	-4.298	0.0005
	D	Medium-sized	0.256	0.00472	0.247	0.266	0.027331	0.000+1	4.270	0.0003
	A	Small-sized	0.394	0.00572	0.383	0.406	0.05959	0.00778	7.660	< 0.0001
ses	A	Medium-sized	0.335	0.00531	0.324	0.345	0.03737	0.00776	7.000	<0.0001
Strategic Emphases	В	Small-sized	0.245	0.00463	0.236	0.254	0.00583	0.00634	0.920	0.9843
Em	ь	Medium-sized	0.239	0.00448	0.230	0.248	0.00303	0.00054	0.920	0.7043
Sic.	С	Small-sized	0.219	0.00433	0.211	0.228	-0.00701	0.00602	-1.164	0.9420
ate		Medium-sized	0.226	0.00434	0.218	0.235	0.00701	0.00002	1.104	0.5420
Str	D	Small-sized	0.233	0.00449	0.224	0.241	-0.03517	0.00646	-5.443	< 0.0001
	Ъ	Medium-sized	0.268	0.00478	0.258	0.277	0.03317	0.00040	3.443	<0.0001
	A	Small-sized	0.428	0.00609	0.416	0.440	0.02623	0.00846	3.101	0.0406
ess	- 11	Medium-sized	0.402	0.00589	0.390	0.413	0.02023	0.000-0	5.101	0.0400
ncc	В	Small-sized	0.236	0.00468	0.227	0.245	0.02003	0.00625	3.203	0.0296
f S	R	Medium-sized	0.216	0.00434	0.208	0.225	0.02003	0.00023	3.203	0.0290
ia c	С	Small-sized	0.212	0.00436	0.203	0.220	0.01165	0.00586	1.987	0.4905
Criteria of Success		Medium-sized	0.200	0.00413	0.192	0.208	0.01103	0.00586		0.4905
Cr	D	Small-sized	0.231	0.00462	0.222	0.240	-0.05266	0.00678	3 -7.767	< 0.0001
	D	Medium-sized	0.284	0.00511	0.274	0.294	0.03200	0.00078		\0.0001

The employees of small and medium-sized enterprises of the forestry and forest-based industry both request that alternative A should be applied in the dimension of organizational glue (small enterprises,  $\hat{X}$ =0.392; medium-sized enterprises,  $\hat{X}$ =0.348). According to alternative A, employees should be united by loyalty and mutual trust. The existence of differences in organizational glue in small and medium-sized enterprises of the forestry and forest-based industry in alternative A (p-value<0.0001) was confirmed.

Strategy of small and medium-sized enterprises of the forestry and forest-based industry should move towards human development, high trust, openness and inertia in cooperation. The results presented in Table 4 show that, at the strategic level of 5 to 10 years, alternative A is preferred (small enterprises,  $\hat{X}$ =0.394; medium-sized enterprises,  $\hat{X}$ =0.335). The test confirmed the existence of differences in alternative A (p-value<0.0001).

In small and medium-sized enterprises, at the strategic level of 5 to 10 years, alternative A (small enterprises,  $\hat{X}$ =0.428; medium-sized enterprises,  $\hat{X}$ =0.402) should be applied. The success of enterprises should be defined on the basis of human resources development and teamwork. The test confirmed the existence of differences in the criteria of success in small and medium-sized enterprises of the forestry and forest-based industry in alternative A (p-value=0.0406).

The results presented in Table 5 show that in small and medium-sized enterprises of the forestry and forest-based industry, a clan corporate culture should be applied at the strategic level of 5 to 10 years, where the work environment resembles an extended family (small enterprises,  $\hat{X}$ =0.381; medium-sized enterprises,  $\hat{X}$ =0.350). The results further show that the existence of differences in corporate culture in small and medium-sized enterprises of the forestry and forest-based industry (clan corporate culture, p-value<0.0001) was confirmed.

Tab. 5 The required level of corporate culture in small and medium-sized enterprises in the forestry and forest-based industry.

Type of corporate culture	Size of enterprise	emmean	SE	asymp. LCL	asymp. UCL	Estimate	SE	z-ratio	p-value
Clan	Small-sized	0.381	0.00338	0.374	0.387	0.03056	0.00469	6.521	< 0.0001
Cian	Medium-sized	0.350	0.00325	0.344	0.357	0.03036			
A 41	Small-sized	0.214	0.00276	0.209	0.219	0.01874	0.00376	4.981	<0.0001
Adhocracy	Medium-sized	0.195	0.00260	0.190	0.200	0.01874			
Market	Small-sized	0.189	0.00260	0.184	0.194	-0.00028	0.00362	-0.077	1.0000
Market	Medium-sized	0.189	0.00256	0.184	0.194	-0.00028	0.00362	-0.077	1.0000
Hierarchy	Small-sized	0.239	0.00290	0.234	0.245				
	Medium-sized	0.276	0.00301	0.271	0.282	-0.03702	0.00416	-8.894	< 0.0001
	Medium-sized	0.381	0.00338	0.374	0.387				

In developed economies as well as in a transforming economy, in small and mediumsized enterprises of the forestry and forest-based industry, at a strategic level of 5 to 10 years, small and medium-sized enterprises have an irreplaceable place (STACHOVA et al. 2018, MURA – GAŠPARÍKOVÁ 2010). They are considered the driving force of the economy because they contribute significantly to improving innovation, to the flexible introduction of new products, they create jobs, are adaptable and are very sensitive to change (MATUSZEWSKA-PIERZYNKA 2018, CURREN – BLACKBURN 2001). Through their business activities, they also significantly influence the region and its development. In addition, they bring a number of social benefits. However, economic development, globalization and related economic changes are putting pressure on businesses to develop even more effective strategies to succeed in a highly competitive environment (PAROBEK et al. 2019, POTKÁNY et al. 2019, Sedliačiková *et al.* 2019, Dominguez 2018, Korauš *et al.* 2018, Graa – Abdelhak 2016, MIKLOSIK – DANO 2016, KOSTRUB – ŠIPOŠOVÁ 2015, STACHO – STACHOVÁ 2015). In this context, innovations are reflected in the corporate culture, which symbolizes an important factor on the basis of which enterprises can achieve a competitive advantage, and thus overall success in the market (ALMUSLAMINI - DAUD 2018, HAAPANEN et al. 2018, PARK et al. 2017).

The presented research was carried out in Slovakia. Its aim was to define the corporate culture in small and medium-sized enterprises of the forestry and forest-based industry. The

research results show that the current level of individual dimensions of corporate culture as well as the overall type of applied corporate culture in small and medium-sized enterprises of the forestry and forest-based industry differs. Small business in individual dimensions of corporate culture is dominated by alternative A, which means a family atmosphere prevails. In medium-sized enterprises, alternative D is used in the vast majority of dimensions. It is a fact that enterprises put an emphasis on thorough following of business practices. Based on the results of the analysis of the overall type of corporate culture, it can be stated that a clan corporate culture is applied in small enterprises of the forestry and forest-based industry. Enterprises with a clan corporate culture have similarities with family-type enterprises. Members share common views and see themselves as part of one large family that is active and engaged. The work environment resembles the one of an extended family with equal opportunities for individuals as well as diversity in the workplace provided. Leadership takes the form of mentoring. Leaders play the role of teachers, advisors and parents. Core values are teamwork, participation, communication and consensus (JAEGER – ADAIR 2017, DEMSKI et al. 2016). For medium-sized enterrprises, a hierarchy corporate culture corresponding to alternative D is typical. It is characterized by its formalized and structured work environment emphasizing procedures and regulations (CAMERON - QUINN 2005). Internal sustainability is emphasized along with the need for stability and control (ANDRONICEANU -TVARONAVIČIENĖ 2019). Leadership is based on organized coordination and monitoring. Emphasis is placed on the efficiency of smooth running, predictability, efficiency and accuracy of management procedures (HERITAGE et al. 2014). Values like consistency and uniformity are included (JAEGER et al. 2017, DEMSKI et al. 2016). Top-down communication predominates. Employee management is focused primarily on ensuring job security.

At the strategic level of 5 to 10 years, individual dimensions of corporate culture and the overall type of corporate culture in small and medium-sized enterprises of the forestry and forest-based industry do not differ. The results show that at the strategic level of 5 to 10 years, in small and medium-sized enterprises of the forestry and forest-based industry in the individual dimensions of corporate culture, alternative A should be applied when leaders are perceived as advisors. In terms of the overall type of corporate culture, the small and medium-sized enterprises of the forestry and forest-based industry should be controlled by a clan corporate culture emphasizing the development of human resources. The focuse is on family relationships within the enterprise. It works as a culture with an inner orientation, common values and goals, cohesion and participation. Individual goals are in line with corporate goals based on their trust in the enterprise (JONES – MADEY 2014). Businesses are further held together by loyalty and tradition. Commitment to the enterprise is high and the long-term benefits of each person's development are emphasized. Great importance is given to cohesion, morality and the working environment. Success is understood in relation to the internal environment and caring for people (ÜBIUS – ALAS 2009).

A similar research in the field of wood processing enterprises was conducted in 2016 (LORINCOVÁ *et al.* 2016). Its aim was to define the level of corporate culture in wood processing enterprises in Slovakia from the point of view of the job category of employees (managers, workers). According to the managers, a market corporate culture was applied in Slovak wood processing enterprises. The views of workers on corporate culture in wood processing enterprises in Slovakia are identical with the results of the research (MATRAEVA *et al.* 2016, JAEGER – ADAIR 2013, BALOGH *et al.* 2011) proving that a hierarchy corporate culture is applied in enterprises. Both analyzed groups of respondents demand that a clan corporate culture ought to be applied in Slovak wood processing enterprises at the strategic level of 5 to 10 years, which confirms not only our research but also earlier research of HITKA *et al.* (2015). Following the results, it can be seen that, it is the main role of managers to support employees, their cooperation, commitment and responsibility to the enterprise.

Employees should share the same values and traditions. They should be loyal. Moreover, the long-term benefits of each person's development must be emphasized as it is the employees who are the "motor" initiating other sources into move and determines their use. Furthermore, employees are a strategic tool for managing many enterprises. They are considered invaluable and irreplaceable capital in terms of achieving long-term goals of a successful enterprise (Kot-Radojewska-Timenko 2018, Fejfarová-Urbancová 2016, Kropivšek *et al.* 2011). Following the previous research (Copuš *et al.* 2019, Salama – Oláh 2019, Kucharčíková – Mičiak 2018, Gautam – Ghimire 2017, Graves 2017, Kucharčíková *et al.* 2016, Lim *et al.* 2016; Weberová – Ližbetinová 2016, Ahmad *et al.* 2012), the technology can be bought, a new management system in the enterprise can be introduced, funds can be borrowed but it will not help the enterprise if there is no capital in the form of high quality workforce, which is the bearer of new knowledge, ideas, experience and skills.

# **CONCLUSION**

A corporate culture is at first sight an inconspicuous but very effective tool significantly and unmistakably distinguishing one enterprise from another. The corporate culture in small and medium-sized enterprises of the forestry and forest-based industry is a key factor of financial performance and at the same time a limiting factor influencing the management processes of the enterprise.

The result of the research is the finding that a clan corporate culture is applied in small enterprises of the forestry and forest-based industry characterized by its family atmosphere and friendly work environment. We consider the clan corporate culture to be the most suitable corporate culture for small businesses in the forestry and forest-based industry, because it provides space for employee development, emphasizes communication, and success is measured in relation to the internal environment and employee care.

The medium-sized enterprise of the forestry and forest-based industry is currently dominated by a hierarchy corporate culture emphasizing compliance with regulations and order as basic values. Internal sustainability is emphasized, together with the need for stability and control. Leadership is based on organized coordination and monitoring. Emphasis is placed on the efficiency of smooth running, predictability, efficiency and accuracy of management procedures. The values of the enterprise include consistency and uniformity. Top-down communication predominates.

At the strategic level of 5 to 10 years, a clan corporate culture should be applied in small and medium-sized enterprises of the forestry and forest-based industry. It can be achieved through collaborative employee management, where employees share the same values and are often in touch with each other. Leaders should play the role of advisors or mentors. The enterprise should unite loyalty and tradition. Dedication to the enterprise should be high. The long-term benefits of each person's development should be emphasized. Great importance should be attached to cohesion, morality and the work environment. Success should be understood in terms of the internal environment, care for employees and long-term investment in human resources. The method of defining the corporate culture can be applied in other industries (transport, construction, agriculture, etc.)

The benefit for managerial practice is the knowledge of the required level of corporate culture in small and medium-sized enterprises of forestry and forest-based industry and the opportunity to use the acquired knowledge in business practice. Knowledge of the corporate culture in small and medium-sized enterprises of forestry and forest-based industry can help to achieve a competitive advantage with an inconspicuous but very effective tool that

significantly and beyond doubt distinguishes one enterprise from another. Moreover, it has a direct impact on performance and the resulting financial success of the enterprise.

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