



## Article

# How to Support the Effect of Transformational Leadership on Performance in Agricultural Enterprises

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Received: 14 August 2020; Accepted: 9 September 2020; Published: 11 September 2020



**Abstract:** The study published in this article contains the results of examining the relationship between transformational leadership and natural performance in agribusiness. For the purposes of the study, natural performance refers to performance that considers the natural results of agrarian plant and animal production. This research focuses on the influence of transformational leadership on business performance through job autonomy and job satisfaction. The study was conducted on a research sample of 757 respondents from 49 businesses. The study verifies a positive association between transformational leadership and business performance, which is mediated by job autonomy and job satisfaction. The research results have proven that transformational leadership has a positive effect on agribusiness performance mediated through job autonomy and job satisfaction. The study contains important knowledge on agribusiness sustainability, as it provides verifiable findings on the relationship between management styles and natural performance of business.

**Keywords:** leadership; performance; agricultural enterprise

## 1. Introduction

Agribusiness occupies a key position in the production of agricultural raw materials. It is co-responsible for the status and development of rural areas and contributes to the revitalisation of the rural landscape by maintaining the rural population and thus preventing the depopulation of marginal rural areas. The common agricultural policy (CAP) seeks to create conditions for farmers to achieve a sustainable system of agriculture through a combination of social, economic and environmental approaches. However, farmers themselves and other rural communities play a major role in making optimal use of natural resources, building a sustainable food system and biodiversity, and contributing to the EU's ecological future. Meeting these ambitious goals is important for sustainable agribusiness. Only viable enterprises, focused on technological and social innovations and oriented towards complex financial and natural performance, will be able to meet the demands of sustainability. Approximately 2.5 million people live outside urban areas in Slovakia, yet only 44,000 workers were employed in agriculture, according to the Green Report for 2018, and the year-to-year decrease was 4.5 thousand people [1]. The number of employees in agriculture in Slovakia is declining much more sharply than the EU average. Although the Fourth Industrial Revolution has replaced part of the workforce with technology, it also requires higher qualifications and expertise. However, the structure of employment in this sector is not in favour of the new trend. Slovakia has a higher share of employees over 50 years of age in agriculture than the EU average (the age structure of workers in primary agricultural production

is also related to low wages, where the age group 55–59-year-olds is the most represented (almost 20%) and almost half of the employees in agriculture are older than 50 years of age. The educational structure is also dissatisfactory (almost half of the employees have an apprenticeship without a high school diploma).). Thus, the question remains as to how to attract young people to work in rural areas, how to retain current employees, how to prepare succession plans for the sake of sustainable know-how and, subsequently, how to create suitable working conditions for them, reflecting societal trends in the world of work and the industrial era.

The EU and its member states are actively trying to support young agribusinesses—self-employed farmers as they enter the market. However, this form of business is not the only one in the field of agriculture. There are a large number of other businesses of various legal forms, whose managers will have to think about how to ensure job satisfaction, its stabilisation and how to increase loyalty and thus improve business results.

The performance of enterprises, including those active in the agricultural industry, is the result of many factors. We recognise external factors, such as the specificities of the market, the uncertainty environment and inner factors, such as management and governance. These are determined, to a major extent, by the enterprise, and can therefore be actively influenced. Agro-managers must learn to reflect upon the new challenges of the world of work, related to demographic trends or changes in lifestyle, and the related intentions of many people to live in rural areas under suitable working conditions. Management styles applied in agribusiness must reflect the above tendencies, which indicate the need for inspirations, individual approaches and intellectual stimulations from management. The task of human resources management is to adequately adapt the tools for building the attractiveness of the business for potential and current employees, as well as the optimal use of human resource potential. The proactive thinking of agro-managers should push the boundaries of their thinking into innovation and organisational learning, knowledge sharing, autonomy and employee responsibility [2]. Jobs are becoming more complex, requiring a high degree of independence and innovative problem-solving in agriculture as well [3]. The specifics that primary agricultural production has and which subsequently generate the specifics of the agricultural labour market are reflected in the approaches to employees, their motivational profile and factors affecting their job satisfaction. The nature of work in agriculture requires a more universal focus of workers, but at the same time there are also relatively high demands on expertise and specialisation in connection with Industry 4.0. More complex and professional tasks can only be performed by employees who are valued, recognised and empowered by the management to work in a demanding and responsible manner [4]. There is a large volume of seasonal, temporary work and necessary overtime in agriculture, and there is a significant unevenness in the need to work during the working day. This is a specific feature of the work activity, which can be reflected by elements of autonomy in job design. In livestock production, work is more physically demanding, and labour productivity is lower, because in some agricultural sectors the possibilities of replacing live labour with mechanical work are considerably limited, and the adverse impact of climatic conditions on workers is also known. There are also large differences between labour resources and job opportunities in different regions.

There is very little research on managerial skills and the effectiveness of using human potential in agribusiness. Research studies are available mainly in the field of motivation and job satisfaction [5–10]. Research studies on other important factors influencing individual and overall organisational performance in this area are insufficient, or almost absent. Most scholarly articles address weaknesses through criticism of the CAP and focus on other external factors, whereas an insight into the management of other sectors offers a wealth of ideas and inspirations on how to improve processes, how to innovate, how to manage people and how to lead them, and many business and public sector studies confirm the positive connections between the monitored management tools and organisational outputs, leading to the competitiveness of businesses and their sustainability.

It is a paradox that a strategically important sector of the economy has an insufficient knowledge base on business sustainability. Agriculture is becoming an increasingly discussed topic, and food

self-sufficiency is becoming a matter of concern for the population. Therefore, it is necessary to focus first on stabilisation and then on the development and sustainability of agricultural enterprises. Our research seeks to verify the positive impact of soft managerial skills on individual and business performance. The originality of our research lies in the connection of the effects of transformational leadership style mediated by job autonomy and job satisfaction not only with individual outputs, but also with overall business indicators. Such a survey of agribusiness in the Slovak Republic has not yet been carried out. Our goal is to examine the moderating effect of job autonomy and job satisfaction in the relationship between transformational leadership style and the achieved results of agricultural enterprises.

## 2. Theory and Hypothesis Development

“Employees are valuable resources to promote the sustainable development of organisations” [11]. Job performance is determined not only by qualifications or other contextual characteristics, but also by internal organisational factors such as job commitment [4,12], job autonomy and other job characteristics [13], leadership style [14] or focus on the wellbeing and the quality of life of individuals in terms of a new sustainable psychological perspective of working relationships, relationships of groups, communities and relationships with nature [15,16].

Transformational leadership (TL) is explained by the authors through four basic components, which are charisma, inspiration motivation, intellectual stimulation and approach to the individual [17–19]. These characteristics allow transformational leaders to motivate their subordinates to exceed their own expectations and their own interests for the good of the business. TL thus transforms subordinates by changing their values [16]. This can then be reflected in the functioning of businesses. Based on empirical studies, transformational leadership is associated with better organisational and individual performance [14,18,20], although there is still a significant gap in identifying the relationship between TL and organisational outcomes [21]. There is higher job satisfaction, commitment to the organisation, motivation and quality of work, as well as the fulfilment of planned goals or less resistance to change [22,23]. Other studies examine, in addition to the direct relationships, the effects of mediating variables, e.g., the role of employees’ attitudes towards leaders, such as trust, satisfaction, personal identification and perceived justice [24,25]. Eisenbeiß & Boerner [26] have addressed the mediating role of employee self-perception in an organisation, which influences individual performance. The mediating effect of organisational identification [24,27] or collective identification [14] has been investigated in the relationship between transformational leadership and contextual performance. Lievens and Vlerick [28] identified the mediating role of knowledge-related job characteristics in the relationship between TL and safety performance. Many other mediating variables increasing the effects of TL and individual outputs are reported by Van Knippenberg and Sitkon [23], Orabi [29], Hoxha [30], Kroll [31] and Overall [32]. Authors report the influence of TL on organisational performance.

In the above-mentioned studies, authors have tested the influences on performance between variables assuming positive associations. Dynamic research models, which are characterised by the existence on endogeneity, are spare in these studies. Li [14] sees an issue of endogeneity in understanding real associations, which are also very complex, for they possess unobservable characteristics of the variables tested by Coles & Li [33].

However, all the above-mentioned studies have been carried out in sectors other than agriculture, where these relationships have not yet been examined. We consider the study of the influence of transformational leadership on the natural performance of agricultural enterprises as a benefit for the theory of management as well as for the practice of agribusiness. When forming the research model and individual hypotheses, we have considered business performance as a broader concept, because focusing only on business results could cause undesirable distortions in terms of business performance for the specifics of business in agriculture.

Based on the above, we have formulated the initial hypothesis of our research as follows:

**H1:** *TL is positively associated with business performance (BP).*

Job autonomy is defined as the extent to which employees are given freedom to perform work and to make decisions in work matters [13,34]. Job autonomy is becoming an important factor in increased job performance [13,35] due to the efficient use of human capital. Many researchers use the Job Characteristic Model (JCM) to examine job autonomy, according to which workers perceive the job according to five core job dimensions: skill variety, task identity, task significance, autonomy and feedback [11,36,37]. Today's organisations should focus mainly on building a workplace where employees feel satisfied with the possibility of self-realisation, the delegation of responsibilities and the creation of job autonomy [4].

In our research on the relationship between leadership styles and job autonomy, we refer to job autonomy as an aspect mediated by managers or businesses, not the work itself, and therefore this characteristic is associated with a participatory and transformational leadership style [38]. Research has so far examined the positive relationships between job autonomy and many other characteristics at the individual employee level, such as job satisfaction, organisational commitment, work behaviour, individual performance and psychological aspects such as stress, burnout and absenteeism [13,39,40]. Conclusions regarding organisational performance are ambiguous. Park [38] states that many other internal and external factors influence this relationship, which may be the subject of research. The author has found a significant influence of automation as a moderator in the relationship between job autonomy and organisational citizenship behaviour. Factors such as industry and business competitiveness have also been identified [13,41,42]. In the field of agriculture, McGraw et al. [43] examined the factors that influence the decision-making of agricultural professionals to work in this sector. The most important factors include responsibility and autonomy. In the European area (Greece), autonomy and competence development [7], a flexible organisational structure and self-motivation (Serbia) [8] have been identified as the main motivators.

Based on these relationships, we have formulated the following hypotheses:

**H2:** *TL is positively associated with job autonomy (JA).*

**H3:** *TL is positively associated with job satisfaction (JS).*

Job satisfaction is examined in many studies in connection to motivation, based on Herzberg's motivational theory. Many motives leading to job satisfaction have already been identified, and they are parts of various theories, concepts and a growing number of researches. Thus, there is an urgent need for their theoretical, methodological and practical confrontation and their integration into the new challenges of the world of work [26,44,45]. Engagement, autonomy and self-development as important motives leading to job satisfaction represent those new challenges [11]. Job autonomy has been reported in many studies as a significant predictor of job satisfaction, positive job attitudes and higher labour productivity [46,47]. Agricultural job satisfaction studies have been conducted in Bangladesh, Nigeria and other developing countries to examine motivational factors leading to job satisfaction. Although agricultural conditions in these countries are completely different from European countries, they can be a methodological example of examining the issue of job satisfaction and the factors that affect it in agriculture [5,6,9,10]. Park [38] highlights their interrelatedness with organisational performance. Therefore, we assume that JA and JS are positively associated with the business results of agricultural enterprises.

**H4:** *JA is positively associated with business performance (BP).*

**H5:** *JS is positively associated with business performance (BP).*

### 3. Materials and Methods

#### 3.1. Sample and Data Collection

We obtained data to verify the hypotheses by means of a questionnaire survey, which took place at the turn of 2019/2020 in the months between December 2019 and March 2020. The research took

place in two stages. We have approached enterprises chosen from the database of agricultural industry. We have contacted members of top management in person with the aim of conducting research and obtaining basic information. After collecting the initial information, later used for the control variables, we have distributed a questionnaire in paper form, gathering information for the mediation model. The questionnaire was distributed to employees by their managers. Fill-out questionnaires were collected in paper form by regular mail. The questionnaires consisted of three parts. The first part was focused on management style, the second part analysed job satisfaction at work and the third part was designed to analyse autonomy at work. All of the questions used the Likert's scale with 5 values. The set of questions was designed based on literature reviews and the already performed research. The performance of enterprises was evaluated based on the Natural Indicator, designed for the purpose of this study.

All questionnaires obtained were inspected and entered into the database. We addressed a total of 75 companies of various legal forms in various regions in Slovakia (less favourable areas for agricultural production—Banskobystrický, Košický, Prešovský and Žilinský regions; agriculturally productive areas—Trnavský, Nitriansky, Trenčiansky and Bratislava regions). Forty-nine companies were willing to attend our survey, from which we received 757 completed questionnaires. The structure of the sample of respondents is given in Table 1.

**Table 1.** Characteristics of the examined sample of respondents.

Variable	Category	Frequency	Percentage	Variable	Category	Frequency	Percentage
Legal Form	Agricultural cooperative	329	43.5	Production orientation	Combined Plant	521	68.8
	Limited liability company	343	45.3		Animal Total	170	22.5
	Joint stock company	85	11.2			66	8.7
	Total	757	100.0			757	100.0
Number of employees	10–49	169	22.3	Age	Up to 40	75	9.9
	51 to 250	588	77.7		41 to 60	610	80.6
	Total	757	100.0		61 and over	72	9.5
					Total	757	100.0
Gender	Male	638	84.3	Position	Managerial	634	83.8
	female	119	15.7		Leading	55	7.3
	Total	757	100.0		Administrative	68	9.0
					Total	757	100.0
Education	Secondary	379	50.1	Region	BB	62	8.2
	university	79	10.4		BA	93	12.3
	primary	299	39.5		Košice	107	14.1
	Total	757	100.0		Nitra	93	12.3
Cultivated land (ha)	101–500	4	0.0		Prešov	64	8.5
	501–1000	3052	6.9		Trenčín	56	7.4
	over 1000	675	89.2		Trnava	197	26.0
	Total	757	100.0		Žilina	85	11.2
					Total	757	100.0

Source: own processing.

All data were analysed using the SPSS 22 software package. Cronbach's alpha coefficient was used to assess the internal consistency reliability of the scales. A mediator model according to Baron and Kenny was used. The Freedman–Schatzkin test was used to test the mediator effect. A series of regression analyses were used to identify the proposed hypotheses. Partial R<sup>2</sup> ( $\Delta R^2$ ), F test and standardised regression coefficient (b) and their test statistics (*t* value) were reported in all regression analyses. The controlled variables were the identification data of the respondents (age, gender, job position and education). ANOVA was used to analyse multiple dependence. We worked at a significance level of 5%. Bonferroni correction was used for pairwise comparisons.

### 3.2. Measures

To test the relationships between transformational leadership style (TL), job autonomy (JA), job satisfaction (JS) and business performance (BP), a mediator model was used, which was based



on the mediating role of JA and JS in the relationship between TL and BP. We consider mediation as a suitable tool for examining causal relationships between variables and involving other mediation variables in the basic relationship, for a deeper examination of the relationships and processes that take place between the identified variables.

TL is an independent, explanatory variable. This variable is operationalised as an expression of employees in relation to the four dimensions of transformational leadership—intellectual stimulation, inspiration motivation, charisma and approach to the individual, which were measured using a 20-item scale developed by Bass and Avolio [48]. The MLQ Multifactor Leadership Questionnaire is a proven and frequently used tool for evaluating transformational leadership style and is considered as the best validated measure of transformational and transactional leadership [49]. Responses to individual items within the TL characteristics were scaled on a 5-point scale (1 = very seldom to 5 = very frequently). After a reliability analysis, the Cronbach's alpha of TL was 0.886 (4 items).

Job satisfaction (JS) is a dependent variable. Its measurement can be approached in two ways. If we understand JS as a one-dimensional phenomenon, i.e., as a continuum of satisfaction and dissatisfaction with working conditions, then a one-item questionnaire is appropriate to measure the overall JS. The second method uses the measurement of individual aspects of JS as satisfaction or dissatisfaction of the respondents with various components of their work and working conditions. Wanous, Reichers and Hudy [50] conducted a meta-analysis of 17 studies of both JS measurements. This has led to an average correlation of 0.63, and the use of a one-item questionnaire (despite its advantages in limited administration) requires scale validation and reliability [50]. As part of the research, we have decided to use both methods of measurement and verify their parallel validity on a sample of surveyed employees of agricultural enterprises. We have performed a multi-item JS measurement using 12 items of the Gallup questionnaire for workplace satisfaction audits [51], with answers to statements on a scale from 1 to 5 (1—no, 2—rather not, 3—I cannot judge, 4—rather yes, 5—yes). After a reliability analysis, the Cronbach's alpha of JS was 0.993 (12 items).

Aggregate job satisfaction correlates ( $r = 0.56$ ) with a one-item scale of perceived satisfaction at the significance level  $p < 0.001$  (Table 2). The comparison to the results of Wanous et al. [50] has shown an even weaker relationship between these two variables, so we assume that a single-item measurement constantly needs parallel validation using another scale measurement.

**Table 2.** Correlation of overall job satisfaction and a one-item emotional satisfaction.

	Satisfaction_Total	Satisfaction_Question
Satisfaction_Total	Pearson Correlation	1
	Sig. (2-tailed)	0.560
	N	757
		757

Source: authors' results.

JA is an intermediate variable that transfers the effect from the independent variable to the dependent variable. The variable is operationalised as an expression of the consent or disagreement of employees to the items expressing their perception of job autonomy, listed in Table 2, which were scaled using 5-point Likert-type scales (1 = strongly disagree and 5 = strongly agree). We used the Job Diagnostic Survey (JDS) developed by Hackman & Oldham [52]. After a reliability analysis, the Cronbach's alpha of JA was 0.935 (3 items).

### 3.3. Business Performance (BP)

A natural indicator (NI), calculated for the years 2017-2019, has been chosen to measure business performance. The calculation of the natural indicator from the available data, using the procedure below, has resulted in a single value, representing each business.

A natural indicator has been chosen for the following reasons:

- a follow-up to research that noted a positive relationship between the intensity and efficiency of agricultural production [53],
- an effort to exclude the impact of pricing, subsidy policy and other objective factors,
- high variability of business results,
- the possibility of distortion of business results (profit or loss) in the financial statements of businesses, which would ultimately affect the results and conclusions of the research. Interviews with business representatives have shown that the distortion of business results in recent years has been caused by an effort to reduce the tax base or by a simple fear not to arouse envy, which of course only applies to profitable businesses. Conversely, in loss-making businesses, due to their interest in obtaining loans or subsidies, the effort was to report at least a minimum profit, e.g., by postponing the loss to future years. In our opinion, business results in agriculture (as of 31 December) are not objectively comparable among enterprises that have only livestock production or only crop production (due to different production cycles and accounting procedures). Business results in agriculture are significantly influenced by non-market factors, mainly subsidies, compensation and support from the Ministry of Agriculture, whereas their income was not always completely objective.

The calculation of the total natural indicator (NI) was based on the natural results of individual agricultural entities achieved in the years 2017–2019: in crop production, the average yields per hectare; in animal production, the indicators of performance and reproductive characteristics of livestock. Business managers indicated the achieved values of the mentioned categories according to the structure of their production. For each value given, we calculated the partial natural coefficient (PNC) as the ratio of this value to the Slovak average in the examined indicator for each monitored year (e.g., if the average yield of wheat for ha in 2018 in a specific enterprise was 3.6 t per ha and the Slovak average for this year for wheat was 4.78 t per ha, the partial natural coefficient of wheat for the given enterprise and the given year is expressed by the ratio  $3.6/4.78$ , which represents a value of 0.75). Thus, for each year, we have obtained a set of partial values of natural coefficients of plant and animal production, expressing the ratio of the indicator of a certain enterprise to the Slovak average in the relevant commodity.

In the next step, the average of partial natural coefficients has been calculated for each enterprise, which resulted in a natural coefficient (NC) for each enterprise for each year examined.

The resulting natural indicator as an average of natural coefficients for the years 2017–2019 is an overall natural indicator of business, which can be used based on the chosen procedure of its calculation as a criterion for comparing businesses with each other in terms of their performance.

We have tested the relationship between transformational leadership and natural business performance through a mediator model. We have verified the direct connection as well as the indirect effect mediated by job autonomy and job satisfaction.

Taking into consideration the fact that one of the conditions of testing causality, which is the influence of time, has not been met, we have assumed the association between variables X and Y. The condition of excluding other options has been partially met, by involving control effects in measurements, but not fully, because our data were not experimental, but a convenience sample.

We have formulated the main research hypothesis as follows:

**H:** *The dependence between TL and BP is mediated by JA and JS.*

To verify the validity of the main hypothesis, we have used five sub-hypotheses:

**H1.** *TL is positively associated with BP.*

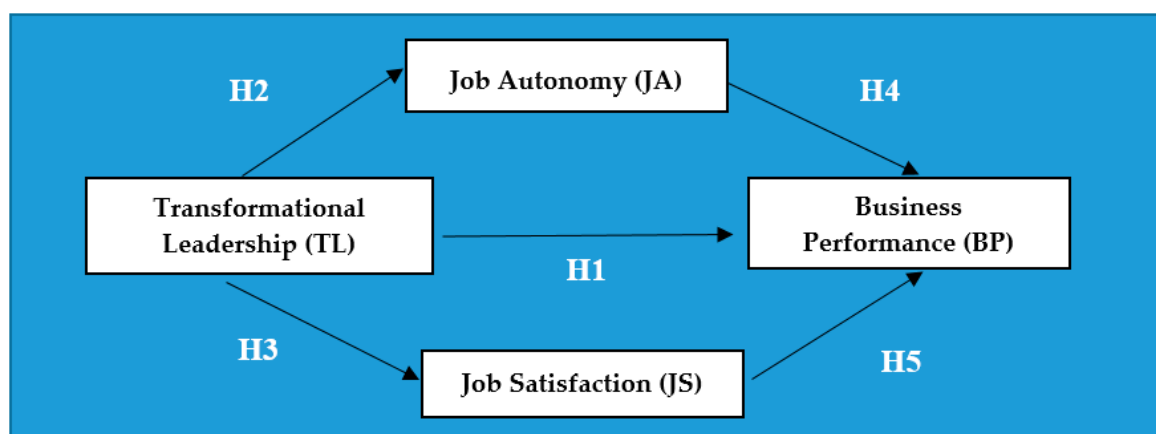
**H2.** *TL is positively associated with JA.*

**H3.** *TL is positively associated with JS.*

**H4.** *JA is positively associated with BP.*

**H5.** *JS is positively associated with BP.*

Figure 1. shows the formulated relationships. The items of the individual variables are listed in Table 3.



**Figure 1.** The mediation model and the five tested hypotheses.

**Table 3.** Items used to measure the selected variables.

Transformational Leadership
Intellectual stimulation
Inspiration motivation
Charisma
Approach to the individual
Job autonomy—to what extent is your current job characterised by the following statements?
I have the freedom to do my job the way I want to.
I have the opportunity for independent and individual initiative.
I have a high level of diversity in my work.
Job satisfaction
Do I know what is expected of me at work?
Do I have the materials and tools to do my job well?
At work, do I have the opportunity to do what I do best every day?
For the past 7 days, have I received an award for good work?
Does my supervisor or anyone else care about me as a person?
Does someone at work encourage me to develop personally?
Is anyone at work interested in my opinion?
Do I feel that the mission of our company makes my work important?
Do my colleagues care about doing quality work?
Do I have a best friend at work?
Has anyone talked to me about my progress over the past 6 months?
Do I have the opportunity to learn and grow professionally at work?

Source: authors' results.

## 4. Results and Discussion

The relationships between individual variables are determined by a correlation matrix. To construct it, we have used summary variables—TL, JA, JS and BP, which have arisen as average scores, calculated from the measured items. Control variables are also included in the matrix. Descriptive statistics and the correlation matrix are shown in Table 4.



**Table 4.** Correlation matrix.

Variable	Mean	Std. Deviation	Size	Land	Age	Gender	Position	Edu.	NI	TL	JA
Size	82.20	40.40	-								
Land	2697.20	1453.0	0.668 **	-							
Age	49.10	8.60	0.062	0.060	-						
Gender	1.16	0.36	-0.012	-0.028	-0.022	-					
Position	1.10	0.30	-0.090 **	-0.069	0.004	0.021	-				
Education	0.79	0.67	-0.083 **	-0.133 **	-0.070	0.164 **	0.525 **	-			
NI	1.02	0.36	-0.280 **	-0.508 **	-0.012	0.003	0.091 **	0.169 **	-		
TL	3.93	0.79	-0.047	-0.094 **	0.050	0.022	0.043	0.225 **	0.239 **	-	
JA	3.72	0.92	-0.144 **	-0.155 **	0.036	0.008	0.061	0.198 **	0.400 **	0.804 **	-
JS	3.80	0.96	-0.179 **	-0.231 **	0.056	0.001	0.026	0.204 **	0.538 **	0.704 **	0.809 **

Source: authors' results. Note. Size = number of employees; TL = transformational leadership; JS = job satisfaction; JA = job autonomy; BP = business performance; \*\*  $p > 0.05$ . Size: 1—1 to 9, 2—10–49, 3—50–249, 4—250 and more employees, 2—51–250; Land: 1—1 to 5 ha, 2—6–100 ha, 3—101–500 ha, 4—501–1000 ha, 5—1001 and more ha; Age: 1—40 years, 2—41–60 years, 3—over 60 years; Gender: 1—male, 2—female; Positions: 1—administrative, 2—manual worker, 3—management; Education: 1—primary, 2—secondary, 3—university.

The correlation matrix shows that significant relationships exist among all four variables. The mediator model can therefore be used to verify and examine their interrelationships. We have used the main hypothesis.

**H:** The dependence between TL and BP is mediated by JA and JS.

When verifying the hypothesis, we have proceeded in three consecutive steps (A, B, C), in which we have verified partial hypotheses by calculating three regressions.

(C) We assume that there is a relationship between natural business performance (Y) and transformational leadership (X).

(A) We assume that there is a relationship between the mediator variables job autonomy and job satisfaction (M) and transformational leadership (X).

(B) We assume that there is a relationship between business performance (Y) and the mediator variables job autonomy and job satisfaction (M), in which X does not participate.

The value of C represents the overall effect; the product of  $A*B$  is the mediated (indirect) effect of X on Y through M. The difference  $C' = C - A*B$  expresses the net (direct) effect of X on Y without the participation of M.

The formulated hypothesis applies if the indirect effect is significant. This means that  $A*B = C - C'$  is significant (using the Sobel test). The significance level is 5% (Sig.—in Tables 5–7 it is referred to as  $p$ -value). We have added the control variables age, gender, job position and education to the model for the overall effect.

**Table 5.** Coding and frequencies of nominal categories.

		Value Label	N
Legal Form	1	Joint stock company	85
	2	Agricultural cooperative	329
	3	Limited liability company	343
Production orientation	1	Combined production	521
	2	Plant production	170
	3	Animal production	66
Region	1	others	664
	2	Bratislava	93

Source: authors' results.

**Table 6.** Tests of Between-Subjects Effects. Dependent Variable: NI.

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	46.152	12	3.846	54.828	0.000
Intercept	8.342	1	8.342	118.926	0.000
Legal form	3.432	2	1.716	24.462	0.000
Production orientation	6.066	2	3.033	43.238	0.000
Region	3.599	1	3.599	51.312	0.000
TL	1.607	1	1.607	22.914	0.000
Number of employees	5.045	1	2.045	29.154	0.000
Land	3.961	1	3.961	56.466	0.000
Age	0.019	1	0.019	0.275	0.600
Gender	0.139	1	0.139	1.978	0.160
Position	0.057	1	0.057	0.812	0.368
Education	0.109	1	0.109	1.555	0.213
Error	52.189	744	0.070		
Total	889.804	757			
Corrected Total	98.340	756			

Source: authors' results.

**Table 7.** Parameter Estimates.

	Model 0		Model 1		Model 2		Model 3		Model 4	
Dependent variable	NU		NU		JA		JS		NU	
Main effects	Coefficient	SE	Coefficient	SE	Coefficient	SE	Coefficient	SE	Coefficient	SE
TL	<b>0.061</b>	0.013	<b>0.065</b>	0.012	<b>0.926</b>	0.024	0.813	0.030	<b>−0.134</b>	0.019
JA									<b>0.080</b>	0.020
JS									<b>0.153</b>	0.016
Controls										
Constant	1.031	0.098	0.999	0.067	0.086	0.131	1.033	0.161	0.834	0.061
[Pform = 1]	0.046	0.035	0.051	0.034	−0.042	0.067	0.051	0.083	0.046	0.030
[Pform = 2]	<b>−0.154</b>	0.025	<b>−0.152</b>	0.025	<b>−0.378</b>	0.049	<b>−0.242</b>	0.060	<b>−0.085</b>	0.023
[Pform = 3]	0.000		0.000		0.000		0.000		0.000	
[Orient = 1]	0.031	0.036	0.032	0.036	0.104	0.071	0.102	0.087	0.008	0.032
[Orient = 2]	<b>0.291</b>	0.042	<b>0.293</b>	0.042	0.126	0.081	<b>0.225</b>	0.100	<b>0.248</b>	0.037
[Orient = 3]	0.000		0.000		0.000		0.000		0.000	
[Region = 1]	<b>−0.231</b>	0.032	<b>−0.228</b>	0.032	0.079	0.063	<b>−0.409</b>	0.077	<b>−0.172</b>	0.029
[Region = 2]	0.000		0.000		0.000		0.000		0.000	
Number of employees	<b>0.002</b>	0.000	<b>0.002</b>	0.000	−0.001	0.001	−0.001	0.001	<b>0.002</b>	0.000
Land	<b>0.000</b>	0.000	<b>0.000</b>	0.000	0.000	0.000	0.000	0.000	<b>0.000</b>	0.000
Age	−0.001	0.001								
Gender	−0.038	0.027								
Position	0.034	0.038								
Education	0.022	0.018								

Source: authors' results.

ANOVA has been used to analyse multiple dependence. We have worked at a significance level of 5%. The method of coding the variables is shown in Table 5, and the results obtained are shown in Table 6.

The breakdown of the variance for the overall dependence in the baseline model has shown that the control variables' legal form of business and their production orientation, region, size by the

number of employees and land area have been identified as significant. This means that the mediator effect needs to be treated for their effect. The results obtained by testing the individual sub-hypotheses are shown in Table 7.

The data in Table 7 show that agricultural cooperatives can benefit less significantly from the implementation of transformational leadership than other legal forms of agricultural enterprises (limited liability companies and joint stock companies). The influence of TL on the results of cooperatives in kind, as well as on job satisfaction and job autonomy, shows a statistically significant lower impact. The situation is also similar in agricultural enterprises located outside the Bratislava region, where there is a statistically significant lower impact of TL on job satisfaction and agribusiness results. On the contrary, larger businesses of plant primary production benefit more significantly from the use of TL.

From the results in Tables 8 and 9, it is clear that the total indirect effect is significant in the positive direction (its value is 0.199), while the direct effect of C is also significant (its value is 0.134), whereas the dependence is negative. Since both direct and indirect effects are significant but of opposite direction, it is a suppression mediation. The total indirect effect is about 1.5 times greater than the direct effect. About 63% of the total indirect effect of transformational leadership on agribusiness performance is mediated by employee satisfaction, and 37% is mediated by job autonomy.

**Table 8.** Quantification of indirect effects in the mediator model.

Indirect Effect Mediated through Individual Mediators		
	M1	M2
	JA	JS
Ai*Bi	0.075	0.125
SEi	0.019	0.014
zi	3.962	8.833
Sig.	0.000	0.000
Total Indirect Effect		
A*B	0.199	
SE	0.027	
z	7.281	
Sig.	0.000	

Source: authors' results.

**Table 9.** Effect size.

Effect	Coefficient	Mutual Ratio	%
Total	0.065		-
Direct	−0.134	0.674	-
Indirect	0.199	1.484	100%
JA	0.075	0.598	37%
JS	0.125	1.673	63%

Source: authors' results.

The interpretation of the findings has led to the following conclusions:

- We have found that the relationships expressed by steps A and B are significant, so there is a relationship between job autonomy (M1), job satisfaction (M2) and transformational leadership (X), and at the same time there is a relationship between business results (Y) and both mediator variables (M1, M2), in which X does not participate. As a result of the significance of these relationships, a precondition for the existence of mediation arises.

- The product of the parameters  $A*B$  is significant, so the indirect effect of transformational leadership (X) on business results (Y) through JS and JA has been confirmed. In percentage terms, we can see that about 63% of the indirect effect falls on JS and about 37% on JA. The formulated hypothesis is therefore supported.
- Both indirect and direct effects are significant, but the direction of their effect is opposed. As the direct and indirect effects are of opposite direction, it is a case of suppression mediation.

The hypothesis of dependence between transformational leadership and the results achieved by agricultural enterprises, which is mediated by job autonomy and job satisfaction, has been confirmed by the research. However, suppression mediation has been identified in cases in which the direct and indirect effects are of opposite direction. The indirect effect of transformational leadership on business results is to a greater extent due to job satisfaction and to a lesser extent to job autonomy. This is a significant finding when business results are influenced by the transformational style of leadership, but only if this effect is transmitted through the job autonomy that leadership provides to employees and also their job satisfaction. Among the attributes of transformational leadership, employees most appreciate the power of charisma, where employees need to identify with, and follow, the leader, show him a high degree of trust and respect his ethical and moral principles, as well as the power of inspiration motivation, whereby managers can motivate subordinates through challenges. Components of transformational leadership style that may have had a negative effect on business performance, as they were rated by employees at significantly lower values, include insufficient focus and willingness of managers to help subordinates develop their strengths and coach them, a lack of interest in constructive criticism from subordinates, a lack of optimistic attitude regarding the future, a lack of presentation and communication of their belief in the successful achievement of business goals and a lack of communication of the most important values and beliefs. Our findings are inconsistent with the findings of similarly focused studies that have resulted in a direct positive relationship between transformational leadership and business performance [14,20,29,30,32]. The reason lies in the specifics of agribusiness and its labour market. Seasonal and temporary work, age and qualification structure, as well as the traditional perception of agricultural enterprises as socialist agricultural cooperatives with a corresponding rigid and authoritative structure, hinder the development of some aspects of transformational leadership, especially the power to transform subordinates and their values, and the ability to listen to their needs and coach them, which is then reflected, according to the above research, in the effective functioning of enterprises. Our findings complement the theory of transformational leadership in agribusiness with additional relationships and support the finding of Trivellata et al. [21] that there is a significant gap in the identification of the relationship between TL and business results.

The research results published in this study are linked to the current knowledge on the impact of leadership styles and leadership competencies on business performance by incorporating intermediate variables that positively transmit these effects. Up to 63% of the total indirect effect is transmitted by the variable job satisfaction, which indicates its importance in agribusiness and thus the need to focus on its fulfilment. The rest of the effect is transmitted by the variable job autonomy as a job characteristic. Our results thus support the findings of many studies on the significant impact of autonomy, engagement and job satisfaction on individual and business performance [11,43,46] and verify their validity in agricultural primary production. The study pushes forward the understanding of the application of a leadership style in managing the performance of a business operating in a highly unpredictable, uncertain, yet strategically important industry. Demonstrable connections between the style of management and business performance must be verified even in agribusiness, which is characterised by live production, high unpredictability of the environment and non-market business components. It is the high uncertainty of the external environment that emphasises the need to focus on the potential of the internal business environment. The human factor has long been considered as a key factor in business success because it determines the use of every other source of business. It is possible to apply the findings to a business related to agricultural enterprises, or to those with common features of management, such as businesses employing workers (building industry), businesses with seasonal

workloads, businesses in non-market conditions or with an emphasis on workflow in conditions of crises (health care, food industry) and businesses with a high uncertainty and unpredictable conditions.

## 5. Conclusions

In this study, we have verified the effects of transformational leadership on business performance in agribusiness. We have assumed that the elements of charisma, inspiration motivation, intellectual stimulation and approach to the individual in management will have a positive effect on the performance of natural businesses. The assumption that there is a direct effect has been fulfilled, whereas dependence is negative, which points to the fact that the transformational style alone does not have a positive effect on business performance. Other factors are needed for a positive effect—in our research, job autonomy and job satisfaction, which by their significant effect change the negative effect of transformational leadership into a positive one. Factors that have caused the negative effect of the transformational style on business performance are related to insufficient skills in the development of employees' strengths, their coaching and their optimistic attitude towards future goals. By defining the relationships in the mediator model, we have also formulated the assumption that the application of the principles of a transformational leadership style will affect business performance through job autonomy and job satisfaction. We consider it important to examine whether transformational leadership, as a leadership style, by influencing one of the characteristics of the job (autonomy) and one of the indicators of the quality of human resources management (job satisfaction), affects the amount of production (business performance). These assumptions have been confirmed. They have even reserved by their significant effect the negative effect of the transformational style of leadership.

The practical implications of our research are as follows: (1) Transformational leadership supports business performance primarily through job satisfaction. (2) Transformational leadership supports business performance through job autonomy. (3) The most important manifestations of transformational leadership include a compelling vision, clear goals, a variety of perspectives on problem solving, the application of ethical principles in decision-making and individualised influence. (4) Transformational leadership does not directly support business performance; there is only significant mediated influence through human resources management. (5). The need for the development of managers in applying the transformational style of leadership is not only related to business goals, but also to the development of employees' strengths, their coaching and the communication of optimistic goals for the future.

The research results in this study contain limitations that need to be demonstrated for the adequate interpretation of the findings. In particular, our research focused on a limited sample (49) of agricultural enterprises, all of which are in Slovakia. In terms of the quality of the research sample, it is a random selection. To generalise the conclusions, it would be necessary to complete the sample. The research was conducted on a sample of 757 employees, while the number of employees varied from business to business.

In relation to the distribution of questionnaires to individual employees by managers, some of the employees' responses about the style of management may be overvalued, which we consider to be another possible limitation of the research. Despite the anonymity of the responses of individual employees, we assume that the direct involvement of managers, whose leadership style was analysed, might have influenced employees. We have applied a set of questions which were designed to eliminate this factor. At the phase of research design, we have assumed that transformation leadership would influence the performance of agricultural enterprises. We have proved the existence of relations between the analysed variables. This does not exclude the validity of other models. Taking endogeneity into consideration, we cannot exclude the validity of controversial relations, i.e., the satisfactory performance of the enterprises influences the job satisfaction of employees as well as the management style.

The model used in the study is not able to fully prove the causality of the analysed variables. The study explains the dependence of the tested variables in one direction only (visualised in the mediation model, Figure 1). The exclusion of other options is only partially explained by the controlled

effects. We see here the opportunity for further research by testing the causality between variables including the effect in time.

The European Commission sets out the objectives of the Common Agricultural Policy (CAP) for the period after 2020, which are aimed at reflecting on climate change, intergenerational transfer of know-how, agribusiness sustainability and competitiveness. Agricultural enterprises in Slovakia remain weak in competitiveness in the EU economic area [54]. Research in agriculture must respond to the challenges of efficiency in agricultural production as well as the urgency of sustainable business activity [55]. Current knowledge on sustainability in agriculture has focused on the impact of autonomy on efficiency [56]. We have identified a lack of knowledge on the relationship between management styles and business performance in the agricultural sector. The challenges facing agribusiness are demanding, with a high impact on the population. The aim of our research has been to contribute to the knowledge on human resources management in agriculture and thus expand the knowledge base for managers on how to reach employees for the successful implementation of strategic decisions in a sector crucial to society. Since the performance of agricultural enterprises is heavily influenced by external factors, enterprises need to focus on inner factors, which have the potential of reliability in managing performance. This is important for companies in agricultural industry as well as for those affected by highly uncertain external factors. Our research proves that any regulations and incentives of entrepreneurship in the agricultural industry targeting job satisfaction will help to support performance and balance the uncertainty of entrepreneurial activities. In the future, we may see the research shift towards the application of a dynamic panel regression, which will enable us to understand the influence of endogeneity and provide a more adequate description of the accommodation processes throughout time, compared to static panel analyses.

**Author Contributions:** Conceptualization, N.J. and Z.J.; methodology, N.J.; software, N.J.; validation, N.J., Z.J. and J.B.; formal analysis, I.N.; resources, Z.J.; data curation, Z.J.; writing—original draft preparation, N.J.; writing—review and editing, J.B.; visualization, J.B.; supervision, Z.J.; funding acquisition, N.J., J.B. All authors have read and agreed to the published version of the manuscript.

**Funding:** This research was funded by a grant related to VEGA Project No. 1/0017/20: Changes in the Application of Managerial Functions in the Context of the Fourth Industrial Revolution and Adaptation Processes of Businesses in Slovakia.

**Acknowledgments:** This research was supported by the Scientific Grant Agency of the Ministry of Education of Slovak Republic and the Slovak Academy of Sciences, VEGA Project No. 1/0412/19: Systems of Human Resources Management in the 4.0 Industry Era.

**Conflicts of Interest:** The authors declare no conflict of interest. The funders had no role in the design of the study; in the collection, analyses, or interpretation of data; in the writing of the manuscript, or in the decision to publish the results.

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