

## Article

# Sustainable Academic Motivation

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**Abstract:** The article examines motivation in higher education and relates it to the concept of sustainability. It consists of a theoretical examination of the terms ‘sustainable motivation’ and ‘academic motivation’, and specifically postulates and explains the concept of ‘sustainable academic motivation’. Sustainable academic motivation is defined as proactive interconnection of basic ideas of sustainability and basic characteristics of academic motivation. With primary attention on disclosing appropriate measures for building sustainable academic motivation, an empirical part presents the results of sociological questioning carried out on  $n = 181$  teachers, administrators, and managers of Slovak and Polish universities. Higher financial evaluation and creating good relationships were found to be the most desirable motivation measures. Results also emphasized a discrepancy between opinions of university managers versus opinions of scientists and teachers regarding effective motivation. Based on the results, and with the support of other opinions, sustainable academic motivation is subsequently defined from five perspectives: (a) As the most important component of conscious behavior; (b) as the starting point of behavior; (c) as the accelerator of behavior and development; (d) as the process; and (e) as the resultative level of all motivational efforts and powers at higher-education institutions. The final part of the article contains recommendations for university management, when affecting and building sustainable academic motivation.

**Keywords:** academic motivation; sustainability; motivators; sustainable academic motivation

## 1. Introduction

Sustainability has become an increasingly important strategic concept for organizations [1]. Although there are various explanations, organizational sustainability can be referred to as the capacity and overall ability of organizations to fulfill their mission in the present without diminishing their capacity to do so in the future [2–4]. In this view, sustainable human resource management links the concept of sustainability and human resource management: “It can achieve the optimum allocation of human resources based on the concept and idea of sustainability, and provide organizations the integrated benefits of economic, ecological and social integration while realizing the sustainable development of organizations, employees, customers, and society” [5] (p. 5). In a university environment, human potential is the most creative and the most sensitive force that universities have. Development of human potential is “the prerequisite and beginning of lasting change: change that begins in the minds of all staff; change that is continuous in the adaptation of visions, strategies, processes, and structures; change that leads to sustainability, corporate social responsibility, motivation, and engagement” [6] (p. 75). Difficulties in the correct development of university personnel potential are increasing, mostly from the perspective of sustainable development.

The concept of sustainable development is very general and can be applied to many different problems in the areas of science, technology, philosophy, and even politics [7] (p. 43). “Sustainable development in higher-education institutions presents distinct challenges, which require an understanding of the inherent, multifaceted complexity of sustainability and the interdisciplinary nature of the subject matter” [8] (p. 1). Motivation is the most important power that provides a great space for sustainable development, but, on the other hand, it also strongly complicates and interferes with sustainable development [9–12].

Work motivation can be defined as “the presence of enthusiasm that drives employees to put in extraordinary effort to deliver results” [13] (p. 32). It is an innate feature affected by four factors: (1) Situation, i.e., surroundings and external stimuli; (2) mood, i.e., the organism’s internal state of mind and emotion; (3) goals, i.e., behavioral goals, purpose, tendency; and (4) tools, i.e., for goal achievement [14]. “People are intrinsically motivated when the principal reason for their effort at work is that they find the work itself exciting, challenging, fulfilling, interesting and energizing” [15] (p. 77). Similarly, Barret pointed out that people feel motivated, i.e., safe, secure, respected, and happy, when they are able to meet their deficiency needs, but they feel anxious or fearful when they are prevented from meeting these needs or when the satisfaction of these needs is under threat [16]. This means that, because of a diversity of priorities, needs, and values, the motivation of each individual is different and constantly changes [17–21].

Despite the fact that many authors address the topic of motivation, the literature on the relationship of motivation and sustainability is still lacking [22] (p. 10). In the majority of these works, it is possible to stumble on terms such as motivation for sustainability, or motivating sustainable behavior, or searching for the object of sustainability in relation to motivation (e.g., [15,23–25]). However, “it is time that motivation for performance improvement must also change from economic compulsion to environmental compulsion” [26] (p. 852).

Motivation for academic achievement is of great importance [14,27–30]. Usually, academic motivation is a tridimensional phenomenon comprising the individual’s set of beliefs about their abilities, intentions, goals, and the relevant emotional response needed to display some particular activity [31]. It is a “pervasive inclination towards doing a task successfully in a particular context and assessing the performance spontaneously” [27] (p. 400). Generally, motivation is an important determinant of behavior for students, teachers, and administrators at all educational levels [32]. Based on current knowledge and experience of university environment, academic motivation can be perceived from three basic standpoints: Motivation of (a) teachers and scientists; (b) managing and administrative staff; and (c) students.

On the other hand, many authors deal with motivation and sustainability in higher education or education for sustainability. For example, Tang’s study investigated the impact of a sustainable-development course on student beliefs, attitudes, and intentions (i.e., motivation): “Sustainable-development courses are generally instrumental to impart the value and practices of sustainability among university students” [33] (p. 1). McCormick et al. developed an “assessment instrument for providing educators with a measure of how students internalize sustainability as a value that motivates them to engage in engineering design for sustainability” [34] (p. 136).

Many other works can be mentioned. However, very few papers reflect on the concept of sustainable motivation of teachers, administrators, and managers in higher education. Most often, the subject matter of this term motivates towards behavior characteristics with elements of sustainability, but not sustainable academic motivation itself. In other words, the topic of focusing on sustainable motivation in higher education is still absent in the literature.

The aim of the article is, therefore, to explore the topic of motivation in higher education and relate it to the topic of sustainability. A problem consists of theoretically searching the terms ‘sustainable motivation’ and ‘academic motivation’, and especially postulating and explaining the concept of ‘sustainable academic motivation’. The main research goals are defined as follows: (1) Analyze and synthesize the basic terminology apparatus and define the concept of sustainable

academic motivation; (2) disclose the level of university-staff motivation and determine the relevant elements in the process of changing it; and (3) examine the impacting factors to be respected in improving academic-staff motivation and transforming it into sustainable academic motivation.

With analysis, synthesis, and generalization of theoretical knowledge, the theoretical part presents opinions on sustainable motivation. The subsequent part defines academic motivation, distinguishing between the teacher motivation and the motivation of management and administrative staff. The empirical part presents results of sociological questioning done for the sample of teachers and managers of Slovak and Polish universities regarding motivation and motivating. Specifically, the basic pillars for higher and sustainable motivation were examined. Then, the discussion part is devoted to postulating and defining sustainable academic motivation and supports this new concept with various related opinions. The final part contains recommendations for university management for affecting and building sustainable academic motivation.

## 2. Academic Motivation

In this section, academic motivation is theoretically examined. In general, motivation can be defined as a mosaic of many various elements, powers, predispositions, intentions, desires, and influences (e.g., [35–39], etc.). From the perspective of social cognitive theories, motivation is defined as “the internal state that arouses, directs, and sustains goal-oriented behavior” [40] (p. 109). It is possible to understand it as a dynamic intrapsychic process and a system of many intrapersonal decision-making instances regarding the future path and actions of an individual. Naturally, “to motivate means ‘to cause to move’, and the first question is the question of causation” [41] (p. 150). This underlines the difficulty of acting on motivation and determining its content, but also aims for the necessity of sustaining cultivated motivation at the desirable level and maintaining its positively escalating dynamic.

Academic motivation represents the perceived and actively exploited strength and conviction of university members to pursue their academic responsibilities. Enthusiasm, self-discipline, perseverance, understanding, and positive energy are required to succeed in the appreciable achievement of academicians. In higher education, three basic kinds of academic motivation can be distinguished:

- (1) Motivation of teachers and scientists, i.e., the motivation of scholars toward their pedagogic, scientifically researching, personality-cultivating, and progressively spreading activities. It can be examined from the perspective of self-determination theory (SDT), achievement-goal theory (AGT), homeostasis theory, integrative governor theory, etc. [42–45]. From the viewpoint of AGT, 10 goal classes can be distinguished: Learning (approach), learning avoidance, task approach, task avoidance, performance approach, performance avoidance, appearance performance, normative appearance, work avoidance, and relational goals [46–52]. From the viewpoint of building sustainable academic motivation, all of these goals have to be respected and facilitated by teachers and scientists (in the case of positive goals) or weakened and even removed (in the case of avoidance goals).
- (2) Motivation of administrative and managing staff, i.e., the motivation toward the university’s sustainable development, providing all teachers, managers, and students with proper services. In addition to the possible application of the above theories, SDT is often considered in staff motivation. Orientation on personal goals and needs for autonomy, competence, and relatedness have to especially be considered [53]. These can then result in specific types of working motivation: Creative, relationship, participation, decision-making, financial-result, and satisfaction motivation [54].
- (3) Motivation of students, i.e., the motivation towards the development of student knowledge and personality dispositions and building a future career. It is the value a student places on learning a task or concept, and their personal interest in the concept, task, instructor, or school [55]. This means that to motivate is generally the process of instigating students to productive cognitive activities, actively learning the content of study [56]. Wilkesmann et al. [57], on the basis of works

by Ryan and Deci [58] and Vallerand et al., distinguished three types of academic motivation, i.e., extrinsic, intrinsic, and amotivation:

If the personal goal of studies is primarily vocationally oriented in the sense that the student expects practical knowledge, skills development, and a good preparation for the future job, this student is extrinsically motivated. If students are scientifically oriented and study because dealing with the topic itself and scientific thinking in general is of interest, these students are intrinsically motivated [59] (p. 9).

Amotivation describes a situation where the actors perceive their behavior as being determined by external forces completely out of their own control [60] (p. 561). This is often caused by a teacher's unfair classification of the student's results, refusal of the teacher when the student asks for help, too-high demands from the teacher, etc.

Because of the first research goal of this paper (analyze and synthesize the basic terminology apparatus and define the concept of sustainable academic motivation), theoretical attention is devoted to the concept of sustainable motivation (Section 2.1). Then, the motivation of university teachers (Section 2.2) and motivation of university administrators and managers (Section 2.3) are more thoroughly examined. Subsequently, based on this theoretical support, and with the use of survey results, presented in Section 3, sustainable academic motivation is outlined in Section 4.1.

### 2.1. Sustainable Motivation

Mature organizations, including universities, must not only perceive sustainability from the perspective of energy sustainability [61,62], financial results and profit [63,64], marketing and e-business [65,66], environmental behavior [67,68], corporate social responsibility [69,70], and business excellence [71,72]. Sustainability must be emphatically conditioned by and connected with motivation. Based on aforementioned reason, the term 'sustainable motivation' came into use.

Deci and Ryan were the first authors to ever use the term 'sustainable motivation'. Within their SDT, sustainable motivation was compared to 'autonomous motivation', and satisfying human needs for competence, relatedness, and autonomy creates sustainable motivation [58]: "Sustainable motivation is called autonomous because it emerges from one's sense of self, and is accompanied by a feeling of willingness and engagement" [73] (p. 4).

"Sustainable motivation contains and explains the process of effectively achieving sustainable motivation, i.e., motivation that is firm, lasting, constant, permanently renewed, improved, and strengthened, and brings new values and strategic competitive advantages" [74] (p. 6). This term defines such motivation, which is desirably dynamic and self-renewing. According to MPG International, sustainable motivation has been labelled in recognition of the need to both (a) motivate sustainable activity and (b) sustain motivation levels [75]. From this perspective, an idea on collective sustainability is very interesting. "An increasing number of research studies have suggested that mindfulness is associated with a greater focus on intrinsic aspirations and a reduced emphasis on extrinsic aspirations, resulting in greater well-being, as well as collective sustainability" [76] (p. 290). This induces the possibility, and at the same time, the need, to perceive sustainable motivation not only as a matter of individuals, but as first and foremost a robust collective effort. This overcomes barriers of individualism and egoistic aspirations of universities' members.

### 2.2. Motivation of University Teachers

From a teacher's point of view, academic motivation is about motivating teaching [56]. "One of the most important aspects of teachers' work is the motivation of students" [77] (p. 118). It is the teacher's "intrinsic motivation that energizes and sustains activities through the spontaneous satisfactions inherent in effective volitional action" [78] (p. 658).

Boyer observed that the work of university teachers involves four different functions: Discovery, integration, application, and teaching [79]. However, "teachers need to know more than just their subject. They need to know the ways it can become understood, the ways it can be misunderstood,

what counts as understanding; they need to know how individuals experience the subject” [80] (p. 6). This indicates a student-directed motivation of teachers.

From the perspective of self-directed teacher motivation, scientists are motivated, like all other members of the human species, by species-wide needs. For example, by needs for food etc.; by needs for safety, protection, and care; by needs for gregariousness and for affection-and-love relations; by needs for respect, standing, and status, with consequent self-respect; and by a need for self-actualization of self-fulfillment of the idiosyncratic and species-wide potentialities of the individual person [81] (p. 2).

Patlins divides teacher’s cognitive motives into the following groups: (1) Broad social motives (understanding the training’s social importance); (2) narrow social (positional) motives (desire to occupy a certain position in the future); (3) motives of social cooperation (orientation to various ways of interacting with others); (4) broad cognitive motives—orientation to erudition; (5) educational- and cognitive-motive orientation to methods of obtaining knowledge; and (6) self-educational motives—orientation on acquiring additional knowledge, forming students’ necessary skills and abilities [56]. The first three of the above motives can be ranked in self-directed teacher motivation. The fourth and fifth (motives to erudition and to obtaining knowledge) can be understood as teacher-directed motivation (applied from the side of university managers and administrators). The sixth connects student-directed, teacher-directed, and self-directed teacher motivation. However, “teacher’s motives may sometimes be in conflict with the motives of managers of the university, i.e., heads of departments, dean, rector, etc., the motives of other teachers, and the motives of students” [9].

It means that the motivation of university lecturers and scientists is full of controversies. Teachers put great verve, enthusiasm, and empathy into their work, but those often transform into some form of apathy and overall exhaustion after years of struggles with administrative restrictions and the unwillingness of students [82]. Dedicated teachers are (also) often workaholics. Workaholism has received increasing attention from researchers [83] and can be defined as “being overly concerned about work, to be driven by strong and uncontrollable work motivation, and to spend so much energy and effort into work that it impairs private relationships, spare-time activities, and/or health” [84] (p. 8). On one side, there are outstanding results of such teacher behavior, as workaholics are able to bring new ideas and enrich the science. They are able to solve difficult challenges deriving from social progress and find scientifically justified solutions for them. They are able to inspire students to create new mental models and overall (models of their) behavior.

However, on the other side, over time, such motivation and incredible work strain absorb a great amount of life energy. They cause an increasing number of teachers suffering from burnout syndrome or depression. This was evidenced by works of several authors [85–89]. For example, although the study of Stupnisky, Hall, and Pekrun found more enjoyment, happiness, pride, and satisfaction at 102 researched faculties, more frustration, anxiety, worry, fear, envy, shame, loneliness, and hopelessness in research were found [90] (p. 1489). This means that efforts to build sustainable academic motivation must respect negative aspects, too.

### *2.3. Motivation of Managerial and Administration Staff*

“Exceptionally well-motivated academic staff can, with appropriate support, build a national and international reputation for themselves and the institution in the research, publishing and professional areas. Such a profile may have a significant impact on the ability of the institution to attract high-caliber students, research funds and consultancy contracts” [91] (p. 11).

Understanding how motivation predicts faculty teaching practices, as well as the precursors to optimal motivation, would greatly benefit faculty development officers and administrators aiming to increase teaching quality and optimize student learning [43]. Stated differently, the motivation of managerial and administrative staff is strong support for teacher and student motivation. It can be viewed as a willingness, enthusiasm, dedication, and proactive approach to the preparation and realization of all conditions, mechanisms, processes, and procedures that ensure the smooth run



of university. It presents a connection of student- and teacher-directed motivation. In contrast to the direct influence of teachers on student motivation, management and administrative staff rather indirectly act on student motivation. However, they directly affect the motivation of teachers and other staff members.

Like the motivation of teachers, scientists, and students, the motivation of university managers and administrators has to also be systematically influenced, formed, directed, and sustained. These employees have to be motivated in a way in which they can feel a desired sense of fulfillment, happiness, and self-actualization. The result of their sufficiently strong motivation should be mainly to create appropriate conditions for the complex work of teachers, scientists, students, and themselves. However, it does not have to just be conditions of a material or financial nature. A focus on intangible, i.e., psycho-sociological preconditions of academic work, is particularly important. For example, Lambrechts et al. presented the idea that, for higher education organizations looking to integrate sustainable development, empowerment is one of the main motivators for effective change [92]. “Leaders can use various intrinsic and extrinsic motivating factors to motivate faculty members, so that they can put their extra efforts to produce bright and successful students, good learning environment, strong culture, and good image of institute” [93] (p. 731). In the field of promoting academic motivation, school counselors can utilize preventive (classroom guidance) and remedial (small-group counseling intervention and individual counseling intervention) approaches [94]. When considering the potential (and always different) efficacy of motivational tools and arrangements, which are outlined in this paper’s empirical part, university managers and leaders “can motivate employees to work and perform to the fullest, by minimizing demotivators” [93] (p. 735). This is because any demotivators, when they occur, are able to destroy previous motivational effort. This straightforwardly leads to the concept of sustainable academic motivation.

### 3. Materials and Methods

Through sustainability education, humanity becomes better equipped to foresee, identify, and address problems in ways that are more innovative and pluralistic [95]. “The performance of academic staff, both as teachers and researchers and also as managers, determines, to a large extent, the quality of the student experience of higher education and has a significant impact on student learning and thereby on the contribution that such institutions can make to society” [91] (p. 11). Naturally, “motivation is an essential factor in understanding student learning, performance, and behavior” [28] (p. 414) on the one hand, while “student motivation is correlated with the intrinsic, extrinsic, and amotivation, and associated processes on the other hand” [28] (p. 415).

Presented opinions might be expressed in this way: “Teachers are the makers of students. They are those influencing personalities and role models, who refine their students’ skills and polish their personalities and make them responsible citizens and leaders for tomorrow” [93] (p. 731). As some others, a study of Sammons et al. associated the motivation of teachers with the motivation of students when thinking about inspiring teaching. The authors suggested “a framework for understanding inspiring teaching hinging on the following: 1. Positive student outcomes (e.g., motivation, self-efficacy, aspiration, achievement); 2. particular teacher behaviors and practices; 3. teacher characteristics (e.g., personality traits, knowledge, and motivation) and relationships” [96] (p. 3). As aforementioned, “students’ personal, professional, and academic development is coupled with well-motivated and satisfied staff” [93] (p. 730). This means the academic motivation has to be researched more deeply.

#### 3.1. Study Design

The authors of this article decided to carry out sociological questioning with the aim to gain knowledge about the inspirations for building the sustainable motivation of university teachers and administrative and managerial personnel. In an effort to justify and compare the obtained results, research was carried out in two Central European countries, Slovakia and Poland, because rules for the recruitment and motivation of Slovak and Polish university teachers are very similar. Candidates

take part in selection procedures that assess intellectual abilities, scientific and educational activities, the degree of responsibility, professional experience related to the occupied position, etc. [97]. In Poland, employment details are governed by internal university statutes [98] that may be different. Therefore, some teachers work full-time jobs for life with a PhD, and for up to 8 years at some universities. Graduation (for the titles of Associate Professor or Professor) is also extremely challenging. It is subject to strict rules and multilevel assessment. However, the financial remuneration and motivation of university teachers in Slovakia and Poland are generally considered to be insufficient [99,100].

To carry out the survey, a structured questionnaire on motivation [36,101] was chosen. The reason for using this analytical tool was that it has a sufficient degree of reliability: 0.846 for processes that affect motivation and 0.895 for basic orientations of motivation. A basic version of this questionnaire has been used by the article's authors since 2001, i.e., more than 10,500 respondents participated in this longitudinal survey. In addition, when compared with the interviewing technique, it brings a satisfying quantity and quality of collected data (from the viewpoint of costs, survey organization, data processing, rate of return, etc.).

In the first surveys (carried out in 2001, 2004, and 2009), the questionnaires obtained a combination of both open and closed questions. Through the open questions, it was possible to collect free expressions/statements on the self-motivation factors of respondents, on the most requested motivational measures that should be implemented at the universities of other types of organizations, etc. For simplifying the questionnaire and making it more attractive to respondents, free responses were processed and the most frequent were incorporated into a new version of the questionnaire as offered lists in closed questions. For example, the 14 most frequent motivational measures (out of a total of 70 measures defined freely by respondents in previous surveys) were included in the closed questions in this survey. Any open question was not incorporated.

Currently, the questionnaire for teachers and administrative staff contains 19 closed questions oriented on various topics in the field of motivation and motivating. For example, exploration of the quality of key processes affecting motivation, factors of self-motivation, the frequency and efficacy of applied motivational tools, and positive versus negative impact of factors causing a change of motivation in time. The questionnaire for university managers consisted of 20 closed questions. These were, to a large extent, identical with the questions for university employees. However, some of the questions examined the selected areas from the standpoint of a managerial position (e.g., application of motivational tools towards employees and way of creating motivational programs).

Overall,  $n = 181$  respondents took part in the survey, with  $n = 90$  respondents from Slovak universities and  $n = 91$  respondents from Polish universities. In terms of gender, 92 were female and 89 were male, with an average age of 46 years. In terms of working position, there were 147 teachers and administrative staff and 34 managers. A more detailed identification of the respondents is outlined in Table 1.

**Table 1.** Basic characteristics of Slovak and Polish respondents.

Age	Slovakia ( $n = 90$ )				Poland ( $n = 91$ )			
	Employees (90%)		Managers (10%)		Employees (73%)		Managers (27%)	
	Male	Female	Male	Female	Male	Female	Male	Female
18–28	4	1	0	0	2	8	1	1
29–39	13	5	3	0	2	8	1	0
40–50	12	10	2	0	9	22	6	5
51–60	9	14	2	1	5	9	4	1
61–	9	4	1	0	0	1	4	2
Total	47	34	8	1	18	48	16	9

The survey was conducted in March–April 2019. In terms of maximizing the return rate, the questionnaires were handed over to the respondents in person. Subsequently, in order to maintain the required anonymity, respondents were able to either put the questionnaires into a prepared box,

or they were able to send them to the address of the Slovak or Polish research teams' supervisors. Respondents used both of these delivery options almost equally.

### 3.2. Study Hypotheses

Although “the most frequently identified objectives are job security, financially and intellectually rewarding work, recognition, status, responsibility, and achievement” [102] (p. 218), salary increases create sustainable motivation only when they concurrently increase feelings of autonomy, competence, and relatedness [73] (p. 14). Support in the career [103], positive relations [104], including identical personal and organizational goals [105], are very important for university staff. However, many studies confirmed [36,37,54] that motivational tools that are applied in practice do not reflect the true motives (needs, interests, ideals) of staff.

Based on this, hypothesis H1 and its negation H2 are stated as follows:

**Hypothesis 1 (H1).** *Motivational tools that are being applied with the highest frequency are not the ones with the highest efficacy.*

**Hypothesis 2 (H2).** *Motivational tools that are being applied with the highest frequency are the ones with the highest efficacy.*

Regarding the third research goal of the paper (examine impacting factors to be respected in improving academic-staff motivation and transforming it into sustainable academic motivation), hypothesis H3 and its negation H4 are stated as follows:

**Hypothesis 3 (H3).** *Social (relationship) motivational measures are more important for potentially increasing future motivation than material factors.*

**Hypothesis 4 (H4).** *Social (relationship) motivational measures are less important for potentially increasing future motivation than material factors.*

Confirmation or refutation of these hypotheses completes the above longitudinal survey of the authors. This could contribute to knowledge progress in the field of development and motivation of human potential in Central European countries. The obtained results could also serve as inspiration for researchers in other countries. From the perspective of the practical management of higher-education institutions, results should be utilized to more accurately focus on activities that university managers could apply to gradually cultivate sustainable motivation.

### 3.3. Data Analysis

To verify the validity of the established hypotheses, a focus on finding out which motivational tools are being applied most frequently was needed. On the other hand, ascertaining the real or assumed efficacy of motivational tools that are being or could be applied on university employees was also required. Moreover, it was necessary to determine which measures respondents consider the most important in terms of their willingness to increase their future performance. This way, it was possible to experimentally define the basic pillars of sustainable academic motivation.

#### 3.3.1. Application of Motivational Tools

The role of respondents was to identify motivational tools that their manager actually applies to them. In the summary for both countries, the factor of personal bonuses and rewards was most often identified (Table 2). The use of threats and sanctions was the least used tool. Such an order was also evident in the case of Slovak universities. However, within Polish universities, providing the necessary information was identified as the most applied. The least-used tool was employee involvement in



decision-making. A worrying result was the frequency of threats and sanctions, which were reported by 30.77% of Polish respondents.

**Table 2.** Applied motivational tools (Slovakia and Poland).

No	Motivator	Slovakia		Poland		Total	
		Freq.	%	Freq.	%	Freq.	%
1	Personal bonuses and rewards	68	75.56	35	38.46	103	56.91
2	Praise	50	55.56	44	48.35	94	51.93
3	Interest in opinions and suggestions	46	51.11	25	27.47	71	39.23
4	Career growth	39	43.33	20	21.98	59	32.60
5	Development and training activities	44	48.89	54	59.34	98	54.14
6	Engaging employees in decision making	32	35.56	8	8.79	40	22.10
7	Providing the necessary information	44	48.89	55	60.44	99	54.70
8	Good relationships and atmosphere	54	60.00	11	12.90	65	35.91
9	Providing platform for autonomy	61	67.78	16	17.58	77	42.54
10	Fairness of superiors	53	58.89	13	14.29	66	36.46
11	Criteria of performance appraisal	30	33.33	16	17.58	46	25.41
12	Application of threats and sanctions	6	6.67	28	30.77	34	18.78

The Z-test was chosen to investigate the significance of potential dependencies between actually applied motivators and characteristics of respondents (Table 3). All motivators were examined in relation to gender, job category, qualification, and country. Calculation of Z-test: yes =  $z > c$ ; c = critical value  $\alpha = 0.05$ ; no =  $z < c$ ; c = 1.96.

**Table 3.** Dependence of applied motivators and selected identifiers (Z-test (z; p-value; significance)).

Real Applied Motivators	Respondent Characteristics											
	Gender			Work Position			Qualification			Country		
1	1.607	0.108	no	1.019	0.308	no	1.813	0.070	no	5.039	<0.001	yes
2	1.422	0.155	no	3.939	<0.001	yes	1.476	0.140	no	0.970	0.332	no
3	3.072	0.002	yes	2.987	0.003	yes	3.435	<0.001	yes	3.257	0.001	yes
4	2.534	0.011	yes	2.402	0.016	yes	3.121	0.002	yes	3.065	0.002	yes
5	1.548	0.122	no	0.538	0.591	no	0.615	0.539	no	1.411	0.158	no
6	2.985	0.003	yes	2.516	0.012	yes	3.275	0.001	yes	4.339	<0.001	yes
7	1.696	0.090	no	0.993	0.321	no	0.344	0.731	no	1.561	0.119	no
8	2.181	0.029	yes	0.480	0.631	no	2.906	0.004	yes	6.718	<0.001	yes
9	3.951	<0.001	yes	0.976	0.329	no	3.965	<0.001	yes	6.829	<0.001	yes
10	2.022	0.043	yes	0.633	0.526	no	3.543	0.001	yes	6.233	<0.001	yes
11	0.472	0.637	no	0.717	0.473	no	0.132	0.895	no	2.434	0.015	yes
12	2.938	0.003	yes	3.112	0.002	yes	3.106	0.002	yes	4.151	<0.001	yes

The importance of dependence on all the above characteristics was confirmed by the following motivators: Interest in opinions and suggestions, career growth, engaging in decision-making, and threats and sanctions. The first three mentioned factors were predominantly labeled by Slovak male managers who belong to the second group in terms of qualification (Associate Professors and Professors). With regard to threats and sanctions, dependence on the part of Polish female employees belonging to the first group in terms of qualifications (secondary education, university education, PhD.) was statistically the most significant.

### 3.3.2. Efficacy of Motivational Tools

A partial look at the effectiveness of motivational tools in relation to the country revealed the difference between Slovak and Polish university teachers (Table 4). Slovak university staff consider the fairness of supervisors and management to be the most effective tool. At Polish universities, it is about

enabling career growth. In the overall score, regardless of country, the most effective motivator was the awarding of personal bonuses and rewards.

**Table 4.** Efficacy of motivational tools on a scale of 1 to 10 (Slovakia and Poland).

No	Motivator	Frequency—Total Score *					
		Slovakia		Poland		Total	
		Frequency	%	Frequency	%	Frequency	%
1	Personal bonuses and rewards	667	74.11	688	75.60	1337	73.87
2	Praise	535	59.44	556	61.10	1062	58.67
3	Interest in opinions and suggestions	549	61.00	648	71.21	1184	65.41
4	Career growth	423	47.00	695	76.37	1105	61.05
5	Development and training activities	439	48.78	657	72.20	1083	59.83
6	Engaging employees in decision making	438	48.67	349	38.35	754	41.66
7	Providing the necessary information	523	58.11	541	59.45	1030	56.91
8	Good relationships and atmosphere	699	77.67	558	61.32	1230	67.96
9	Providing platform for autonomy	662	73.56	611	67.14	1263	69.78
10	Fairness of superiors	700	77.78	511	56.15	1175	64.92
11	Criteria of performance appraisal	410	45.56	359	39.45	730	40.33
12	Application of threats and sanctions	422	46.89	300	32.97	353	19.50

\* Points (1–10) assigned to efficacy were cumulated. Slovakia, 900 = 100%; Poland, 910 = 100%; total, 1810 = 100%.

In the second part of the question, the respondents' task was to select the three most important tools from those they identified as efficient in the first part of question. Respondents should assign a value of 1 for the first/most important of the top three motivators; value of 2 to the second; value of 3 to the third. They were scored by three points (first most efficient), two points (second), and one point (third). The total sum in Table 5 was calculated as the number of the first most effective tool multiplied by three points, plus the number of the second most effective tool multiplied by two points, plus the number of the third (multiplied by one point). Slovak respondents chose good relationships and atmosphere, and Polish ones chose personal bonuses and rewards. The opinion of Polish respondents coincided with the overall score regardless of country.

**Table 5.** Efficacy of three most important motivational tools (Slovakia and Poland).

NO	Motivator	Slovakia				Poland				Total			
		1st	2nd	3rd	Σ	1st	2nd	3rd	Σ	1st	2nd	3rd	Σ
1	Personal bonuses and rewards	26	4	15	101	43	6	12	153	69	10	27	254
2	Praise	4	9	4	34	2	5	3	19	6	14	7	53
3	Interest in opinions and suggestions	2	9	8	32	3	11	12	43	5	20	20	75
4	Career growth	2	6	1	19	15	9	15	78	17	15	16	97
5	Development and training activities	6	2	2	24	3	13	13	48	9	15	13	70
6	Engaging employees in decision making	0	2	4	8	0	0	4	4	0	2	8	12
7	Providing the necessary information	2	7	7	27	12	25	6	92	14	32	13	119
8	Good relationships and atmosphere	15	23	18	109	1	7	5	22	16	30	23	131
9	Providing platform for autonomy	10	11	14	66	9	11	12	61	19	22	26	127
10	Fairness of superiors	21	15	13	106	3	4	8	25	24	19	21	131
11	Criteria of performance appraisal	2	1	4	12	0	0	1	1	2	1	5	13
12	Application of threats and sanctions	0	1	0	2	0	0	0	0	0	1	0	2

\* 1st, 2nd, 3rd of efficacy and total sum (Σ).

In the validity test of Hypothesis H1, personal bonuses and rewards were the most effective factor (for both countries). This is confirmed by Tables 4 and 5. It can be concluded that financial remuneration is still perceived as a very important motivational tool, despite the fact that many studies have confirmed its short-term effect [73].

When examining the relation between real application and/versus the potential efficacy of financial rewards, hypothesis H1 was rejected in favor of H2 in this factor. If the attitude of employees and managers towards remuneration remained unchanged, they still consider this factor to be the most effective and require its frequent application. However, this may ultimately reduce its effectiveness.

Further important factors in terms of effectiveness for respondents were good relationships and atmosphere, space for autonomy, and fairness of supervisors and management. Unfortunately, none of these factors ranked among the most applied motivators in the joint assessment for both countries. Based on the above, it can be concluded that hypothesis H1 was not rejected (i.e., it is true with a probability of 95%). H1 could also not be rejected in the case of Polish academicians because only one of the three most effective motivators ranked in the group of the first three most widely applied tools. Specifically, it was a provision of necessary information. For Slovak universities, H1 was fully rejected, as respondents considered the first three most applied motivators to be the most effective (rewards, relationships, and fairness).

Table 6 outlines the dependencies of the most effective motivators in terms of gender, work occupation, qualification, and country. Calculation of Chi-Square Test: yes =  $\chi^2 > c$ ; c = critical value  $\alpha = 0.05$ ; no =  $\chi^2 < c$ ; c = 16.919,  $\chi^2$  (9); c = 15.507,  $\chi^2$  (8); c = 12.592,  $\chi^2$  (6). Total dependence of all motivators was confirmed for both the countries. That is, Slovak versus Polish respondents perceived the effectiveness of motivational tools differently.

**Table 6.** Dependence of motivator efficacy and selected identifiers ( $\chi^2$  test ( $\chi^2$  (9); p-value; significance)).

Motivators	Respondent Characteristics											
	Gender			Work Position			Qualification			Country		
1	12.256	0.199	no	14.644	0.101	no	20.736	0.014	yes	54.971	<0.001	yes
2	15.713	0.073	no	27.926	<0.001	yes	12.428	0.190	no	30.972	<0.001	yes
3	9.763	0.370	no	16.663	0.054	no	7.807	0.554	no	19.443	0.022	yes
4	9.513	0.391	no	10.379	0.321	no	8.105	0.524	no	35.798	<0.001	yes
5	11.814	0.224	no	21.804	0.010	yes	25.369	0.003	yes	32.200	<0.001	yes
6	12.617	0.181	no	26.900	0.001	yes	17.206	0.046	yes	18.760	0.027	yes
7	29.923	<0.001	yes	37.821	<0.001	yes	7.822	0.552	no	55.618	<0.001	yes
8	15.274	0.084	no	37.364	<0.001	yes	12.402	0.192	no	22.085	0.009	yes
9	9.454	0.396	no	25.382	0.003	yes	11.967	0.215	no	17.804	0.038	yes
10	12.855	0.117	no	41.033	<0.001	yes	13.048	0.110	no	27.075	<0.001	yes
11	22.045	0.009	yes	34.904	<0.001	yes	7.608	0.574	no	17.954	0.036	yes
12	15.193	0.019	yes	21.880	0.001	yes	6.108	0.411	no	6.432	0.377	no

### 3.3.3. Motivational Measures

The task of respondents in this area was to mark all 14 listed motivational measures that would be most suitable for improving motivation at their university. Recommended motivational measures (Table 7) were divided into two main categories: Social/relational (S) and material (M). In a summary evaluation for both countries, the most desirable motivation measure was, again, higher financial evaluation and rewards. Creating good relationships and a positive atmosphere came second. The above order was also identical with Slovak respondents. However, for Polish respondents, training and skill development was the most desirable measure, with higher salary and bonuses placing second.

The relationship between the most desirable measures was examined in its links with four motivation orientations (Table 8), i.e., motivation to quality of work; motivation to knowledge and skill improvement; motivation to new-suggestion submission; motivation to cooperation with the superior (for employees) or motivation to motivate subordinates (for managers). Calculation of Chi-Square Test: yes =  $\chi^2 > c$ ; c = critical value  $\alpha = 0.05$ ; no =  $\chi^2 < c$ ; c = 9.488,  $\chi^2$  (4); c = 7.815,  $\chi^2$  (3).

**Table 7.** Most requested motivational measures (Slovakia and Poland).

No	Requested motivation measures	Cat. *	Slovakia		Poland		Total	
			Freq.	%	Freq.	%	Freq.	%
1	Greater interest in employees	S	25	27.78	51	56.04	76	41.99
2	Training activities and skill development	M	22	24.44	62	68.13	84	46.41
3	Creating good relationships	S	50	55.56	49	53.85	99	54.70
4	Higher remuneration and rewards	M	51	56.67	55	60.44	106	58.56
5	Career growth and job prospects	M	17	18.89	44	48.35	61	33.70
6	Participation in decisions	S	16	17.78	9	9.89	25	13.81
7	Fairness, justice, and humaneness of superiors	S	46	51.11	33	36.26	79	43.65
8	Providing necessary information	M	35	38.89	47	51.65	82	45.30
9	Mutual and open cooperation	S	40	44.44	18	19.78	58	32.04
10	Space for autonomy and self-realization	M	26	28.89	24	26.37	50	27.62
11	Better work conditions	M	31	34.44	24	26.37	55	30.39
12	Recognition for quality work	S	26	28.89	34	37.36	60	33.15
13	Employee bonuses and benefits	M	33	36.67	20	21.98	53	29.28
14	Improving mutual communication	S	27	30.00	7	7.69	34	18.78

\* S = social (relationship), M = material.

**Table 8.** Dependence of most requested motivation measures and orientations ( $\chi^2$  test ( $\chi^2$  (4);  $p$ -value; significance)).

Motivational Measures	Motivation to											
	Quality Work			Improve Knowledge and Skills			New Suggestions			Cooperate/Motivate		
1 (M)	5.457	0.244	no	8.558	0.073	no	7.022	0.135	no	11.083	0.026	yes
2 (S)	11.582	0.021	yes	10.965	0.027	yes	7.373	0.117	no	11.775	0.019	yes
3 (M)	2.689	0.611	no	10.458	0.033	yes	10.203	0.037	yes	10.805	0.029	yes
4 (M)	14.715	0.005	yes	11.836	0.019	yes	7.924	0.094	no	2.709	0.608	no
5 (S)	4.999	0.287	no	14.086	0.007	yes	7.641	0.106	no	13.119	0.011	yes
6 (S)	22.226	0.001<	yes	11.145	0.025	yes	9.026	0.060	no	6.559	0.161	no

1. Higher remuneration and rewards; 2 creating good relationships; 3. training activities and skill development; 4. providing necessary information; 5. fairness, justice, and humaneness of superiors; 6. greater interest in employees. S = social (relationship), M = material measures. The first six most requested motivational measures were selected for dependency research (Table 7—Total).

Deeper examination shows that, in the measure of higher financial reward (M), dependence was confirmed in only one case. This factor was identified by 88.9% of respondents with a low motivation to two-sided collaboration of manager and employee. In other words, 88.9% of respondents who currently feel low motivation for managers and employees to work together would welcome incentives in the form of higher financial rewards and rewards in the future. Creating good relationships and a positive atmosphere (S) was identified by 100% of respondents who feel low motivation for quality work and 83.3% of respondents with low motivation to increase their level of professional knowledge and skills.

Statistically significant dependence was also found in 70.8% of respondents whose motivation for cooperating and motivating was lower. On the other hand, respondents who would prefer educational activities and skill development (M) in the future currently feel very motivated in up to three orientations. This is the motivation to increase the level of professional knowledge and skills (62.3%), to submit new ideas and increase the efficacy of the education process (65.7%), and to the mutual cooperation of manager and employee (72%). This is a good basis for building sustainable motivation. The reason is that, like any other process or domain of work behavior, promotion of work motivation and achieving its sustainable state must have at least some foundation—solid support. This is important for the implementation of any organizational change [106]. It can certainly be argued that creating sustainable motivation is a significant change at every university. As is presented in Section 4.1, crucial ideas of

sustainability, e.g., self-responsibility, respect to the future, prosocial behavior, and visualization of progress, meet crucial ideas of academic motivation, e.g., self-responsibility and responsibility for others (colleagues, students), building the future, enthusiasm, and reasons. Stated differently, the level of motivation achieved so far affects the level and stability of both current and future motivation [36].

Those respondents who labeled the provision of necessary information (M) currently feel rather lower motivation for quality work (87.5%), and low motivation to increase their level of knowledge and skills (66.7%). Results also indicated that respondents with low motivation to increase knowledge and skills (83.3%), as well as manager and employee collaboration (55.6%), would like to see the fairness and humaneness of superiors (S) applied in the future. Greater interest in employees and their opinions (S) was indicated by respondents whose motivation for quality work (100%) and increasing the level of professional knowledge and skills (81.8%) was rather lower. These results again emphasize the link between sustainability and motivation: The past influences the present and future, both positively and negatively [9].

### 3.3.4. Motivational Measures and Performance Increase

The last examined area (Table 9) was the relationship between required measures and potential increase in academic performance. Recommended measures by respondents to university management for fortifying their motivation (Table 7) and the declared percentage increase in academician performance in a better motivational approach towards them were examined. Calculation of Chi-Square Test:  $\chi^2 > c$ ;  $c$  = critical value  $\alpha = 0.05$ ; no  $\chi^2 < c$ ;  $c = 9.488$ ,  $\chi^2$  (17).

**Table 9.** Dependence of motivation measures and extent of performance increase (Chi-Square test ( $\chi^2$  [17])).

		Extent of Potential Performance Increase	<i>p</i> -Value	Significance
1	Greater interest in employees (S)	3.057	0.548	no
2	Training activities and skill development (M)	2.496	0.645	no
3	Creating good relationships (S)	2.435	0.656	no
4	Higher remuneration and rewards (M)	1.251	0.870	no
5	Career growth and job prospects (M)	2.074	0.722	no
6	Participation in decisions (S)	8.812	0.066	no
7	Fairness, justice, and humaneness of superiors (S)	8.653	0.070	no
8	Providing necessary information (M)	7.509	0.111	no
9	Mutual and open cooperation (S)	0.407	0.982	no
10	Space for autonomy and self-realization (M)	2.655	0.617	no
11	Better work conditions (M)	4.492	0.343	no
12	Recognition for quality work (S)	5.699	0.223	no
13	Employee bonuses and benefits (M)	2.483	0.648	no
14	Improving mutual communication (S)	1.643	0.801	no

\* S = social (relationship), M = material.

Since the dependence between incentives and the rate of possible performance improvement was not confirmed on the basis of Table 9, the collected data were further investigated. It can be concluded from Table 10 that the same statement applies to each measure: Identification of any factor prevails precisely in those respondents who expressed their performance increase by an average of 1–20% or 21–40%. Precisely because such a phenomenon was repeated for all 14 measures, the dependence of any factor was not statistically more significant than the others. This follows that all motivational measures are important for a potential increase in performance. This means that sustainable academic motivation needs to be intentionally and thoughtfully built. It is necessary to apply a variety of motivational measures (both social and material) in this university-wide effort. Simultaneously, the individuality of each academician has to always be respected in all motivation processes.



**Table 10.** Dependence of motivation measures and extent of performance increase (frequency %).

No	Requested Motivation Measures	Intervals of Potential Performance Increase										
		1–20		21–40		41–60		61–80		81–100		Total
1	Greater interest in employees	26	38.24%	29	42.65%	9	13.24%	2	2.94%	2	2.94%	
2	Training activities and skills development	31	43.06%	30	41.67%	6	8.33%	3	4.17%	2	2.78%	72
3	Creating good relationships	30	41.10%	29	39.73%	10	13.70%	2	2.74%	2	2.74%	73
4	Higher remuneration and rewards	36	47.37%	28	36.84%	8	10.53%	2	2.63%	2	2.63%	76
5	Career growth and job prospects	20	39.22%	22	43.14%	6	11.76%	2	3.92%	1	1.96%	51
6	Participation in decisions	5	33.33%	7	46.67%	0	0.00%	2	13.33%	1	6.67%	15
7	Fairness, justice, and humaneness of superior	22	36.07%	24	39.34%	11	18.03%	1	1.64%	3	4.92%	61
8	Providing necessary information	23	35.94%	28	43.75%	10	15.63%	2	3.13%	1	1.56%	64
9	Mutual and open cooperation	16	42.11%	15	39.47%	4	10.53%	1	2.63%	2	5.26%	38
10	Space for autonomy and self-realization	17	45.95%	14	37.84%	2	5.41%	2	5.41%	2	5.41%	37
11	Better work conditions	19	45.24%	14	33.33%	7	16.67%	0	0.00%	2	4.76%	42
12	Recognition for quality work	19	37.25%	20	39.22%	9	17.65%	2	3.92%	1	1.96%	51
13	Employee bonuses and benefits	19	48.72%	14	35.90%	5	12.82%	0	0.00%	1	2.56%	39
14	Improving mutual communication	11	52.38%	7	33.33%	1	4.76%	1	4.76%	1	4.76%	21

\* Total = 100% of motivational-measure frequency.

Table 10 shows that higher financial rewards are the most numerous measure that would result in a potential increase in performance. However, other motivational measures were identified with almost the same number of respondents: Creating good relationships and a positive atmosphere; training activities and skill development; increased interest in the opinions and views of employees; fairness, justice, and humaneness of superiors; and providing necessary information.

Subsequently, links between potential increase in academic performance and the significance of the impact of social versus material factors were examined. Looking at the most desirable measures, it can be stated that the ratio between social and material factors was 3:2 in favor of social factors. To this extent, hypothesis H3 is not rejected.

#### 4. Definition of Sustainable Academic Motivation and Discussion

The main inspiration of this article was to contribute to the development of behavioral sciences on the one hand, and to help in the development of higher education on the other. For this reason, the comprehensive and conclusive focus of this article is the experimental definition of the concept of sustainable academic motivation (Section 4.1). The reason is achieving an appropriately high and sustainable level of motivation, i.e., “integrating sustainability within institutions of higher education can have a tremendous impact on students, faculty, and the larger community” [8].

##### 4.1. Sustainable Academic Motivation

Sustainable academic motivation can be defined as a conscious, firm, persistent, responsible, and action-capable force, a mixture of reasons, and the commitment of key participants in university activities. It is a proactive interconnection and even penetration of sustainability and academic motivation into one unique behavioral system. When examining the nature of sustainable academic motivation, the topic should be considered from the following perspectives or inner contents:

(1) As the most important component of conscious behavior.

- The sustainable motivation of university staff can be characterized as deliberately selected and respected motives and accepted (experientially repeated) patterns of academic behavior. Academic motivation positively influences academic performance [107] and focuses it to complex developmental and prosocial goals. Regarding sustainably motivated behavior, setting goals higher is very important [108].
- Because the academic motivation of students can most simply be defined as “the variety of all factors and reasons that influence a person to attend school and obtain a degree” [109] (p. 709), awareness, understanding, and application of these elements severely shape both academic and private efforts of students. If students deliberately build and strengthen

their academic motivation, it becomes sustainable for a long period of time—the conscious and motivated stay of the student at the university affects not only their behavior during university studies, but also their entire future.

- (2) As the starting point of a behavior. Because motivation is a function [110] or substructure of personality [111], personality predetermines and somehow starts all motivated activities of individuals. Building on individuals' genetic predispositions, initial academic motivation is shaped and built by prior upbringing, education, or career [112–114].
  - In general, motivation explains and justifies both real and intended behavior [115,116] of scholars at the beginning of their academic career. If scholars decided to work in higher education, and their motivation for this decision was desirably strong and firm, by entering the academic environment, their former work motivation becomes academic, and triggers/starts their following career ambitions and resolutions. However, it is important to prevent the application of questionable research practices (QRPs) [117].
  - Motivation of students during their start at the university is a reflection of their learning motivation created in high school [11]. The beginning of university studies is a breakthrough element of students' motivation and life, and is often caused by leaving home for campus, getting to know new classmates, the higher difficulty of studies, awareness of own responsibilities, etc. [118]. The effort to handle university studies thus opens up another dimension of their former academic motivation—motivation for sustaining it.
- (3) As the accelerator of behavior and development.
  - The sustainable motivation of students, managers, and teachers strengthens, invigorates, and even vitalizes the sustainable motivation of all professorates. This idea can also be worded in the opposite sense: "If talented and competent staff members are not motivated enough by their supervisors, and if they are not happy with their job, university, and management, then they may leave the university" [93] (p. 731), decrease, or resign from their academic effort. This means that the sustainable motivation of scholars has to accelerate, progress, and excel all scientific, publication, and educational outputs.
  - The sustainable motivation of all university teachers, scientists, managers, and clerks dynamizes the motivation of students, and can even transform it to a higher, more self-responsible and self-aware level, i.e., transcendental motivation. Transcendental is "the motivation to do things for others, the motivation to contribute" [119] (p. 204). When consciously and creatively supporting and accelerating such motivation from the side of university staff [36,120,121], it can meet the essential principles of sustainability. This can transform oneself to sustainable transcendental motivation of students and graduates.
- (4) As a process. "The process of motivate others consists in unifying or establishing of a common goal, thereby showing the distance between the state that currently exists and the state that is to be achieved, while the individual will perceive this distance as a certain tension is to be overcome" [122] (p. 127).
  - For the motivating to become a systematic and sustainable process, it must be embedded in the university's system of management as a crucial internal process. It must impact the motivation of as many lecturers, managers, and students as possible.
  - Moreover, motivating from the side of university must be continually complemented by self-motivating processes. That means processes that both the university staff and students evoke and perform inside themselves: "By self-motivating, academic goal-directed activity is instigated and sustained" [123] (p. 283).

(5) As a resultative level of all motivational efforts and powers at higher-education institutions.

- From a procedural viewpoint, achievement of the sustainable motivation of university members (staff as well as students) can result in 'precision teaching': "[A] precision teacher performs like a coach, and advisor, and an on-line instructional designer. He or she arranges materials and methods for students to teach themselves, including self-counting, timing, charting, and one-on-one direction and support" [124] (p. 51). In this sense, the motivation of teachers and students becomes symbiotic.
- From an overall and complex viewpoint, real (resultative) sustainable academic motivation can be achieved and considered as the most important consequence of all motivational efforts. Such motivation is strong and deeply embedded in the minds and behaviors of university members. It attracts, generates, justifies, strengthens, accelerates, and fulfills the motivation not only of current university members, but also of future ones—new teachers, administrators, managers, and students. In this sense, motivation becomes an established, automatic part of the university and its progress.

It is important to note that all five perceptions of sustainable academic motivation complement each other and find true meaning only in the case of their mutual dynamic unity.

#### 4.2. Discussion

According to Green, Preston, and Janmaat, "comparatively little is known about the mechanisms through which learning influences different kinds of individual social behavior, the context within which such behaviors occur, and how and why they change over time" [125] (p. 19). This is because academic motivation, i.e., the motivation of university teachers (lecturers, coaches, mentors, etc.), managers, and students is very sensitive and changeable over time. Transformation of momentary (and often accidental) motivation into sustainable academic motivation has to be systematic and managed by various and individually differenced motivational strategies, programs, conditions, events, tools, and elements [36,38,93,126,127].

When relating the results presented in the paper's empirical part to other studies, a study of Shaheen, Sajid, and Batool can be mentioned. It flowed from a study stating that "although most of the academicians felt getting support from an university administration in career opportunities, many of them are not satisfied with the administrative policy that is responsible for their low motivation and most of them are not motivated and satisfied with their salary" [103] (p. 111). Similarly, the study of Figurska, performed on a sample of 210 knowledge workers, searched the basic determinants of engagement: "Pay equivalent to the employees input in work, good atmosphere at work, opportunities for career development, appropriate relationships with superiors, and opportunities for knowledge and skills development are factors which have the greatest influence on the staff decisions about changing a place of employment or staying in the organization they work in" [104] (p. 56). Described motivation elements are similar to suggestions presented by Slovak and Polish respondents in Table 10, especially interest in employees and good relationships.

Daumiller et al. focused on a structure of university-teacher achievement goals, their relationship to biographical characteristics and other aspects of teacher motivation, and teaching quality. The answers of 251 teachers measured their achievement goals, self-efficacy, and enthusiasm. The created hierarchical linear models suggested positive associations of teachers' mastery goals with teaching quality, while negative associations were indicated for performance- and work-avoidance goals in relation to teaching quality [105]. A subsequent study of Daumiller, Dickhäuser, and Dresel examined the achievement goals of 1066 university teachers. Results confirmed that well-established mastery, performance approach, and performance-avoidance goals are likewise valid for university teachers. More concretely, it is appropriate to differentiate between appearance and normative components of performance goals, between learning avoidance goals and approach goals, and between task

goals and learning and performance goals. Work avoidance and relational goals should also be distinguished from all previous goals. Structural equation modeling pointed to the relevance of the goals: Theoretically sensible relationships with positive affect, attitudes toward help, and teaching quality affirmed the predictive validity of each goal class [42]. This corresponded with the classification of motivation orientations in this paper (Table 8): Motivation to quality work, to improve knowledge and skills, to submit new suggestions and the effectiveness of processes, and to cooperate with superiors (for university staff) or to motivate subordinates (for university managers). In contrast to 30.77% of Polish respondents (Table 2), threats and sanctions should not be used at all.

Stupnisky et al. experimentally created a conceptual faculty model for teaching best practices. The model has three connected areas: (1) Basic psychological needs (autonomy, competence, and relatedness); (2) motivation (autonomous, introjected, and external); and (3) teaching best practices (instructional clarity, higher-order learning, reflective and integrative, and collaborative learning). “Support for the overall model showed faculty autonomy, competence, and relatedness positively predicted autonomous motivation (intrinsic, identified), but not controlled motivation (introjected, external). Autonomous motivation, in turn, predicted greater incorporation of all considered effective teaching strategies” [43] (p. 15).

When examining the relationship between teacher motivation and student motivation, a 2016 study by Feri et al. had inspiring results. It was performed on a sample of 199 students of the UPH Medical School. This demonstrated an effective contribution of both students’ autonomous motivation and tutors’ autonomy support towards students’ academic achievement: “Students’ autonomous motivation and tutors’ autonomy support may be important determinants in developing students’ academic achievement” [128] (p. 421). Both student motivation and teacher motivation created firm foundations for mutual trust and reliability at the university [129]. This was probably the reason why the motivation of university teachers, administrators, and managers for quality work (that mainly means working with students and on their growth) also reached the highest level between all four motivation orientations in the survey (Table 8). On the other hand, none of the motivational orientations surveyed reached their potential maximum in the survey (i.e., five points from the five-degree scale). Thus, motivation shows signs of disruption. This is a reaction to the relatively challenging conditions of graduation and career (and salary) growth at Slovak and Polish universities. In this process, for example, scientific success of the candidate is proven (number of scientific projects). Simultaneously, international reputation (number of publications in the Scopus and Web of Science databases, number of citations in these databases), organizational-pedagogical proactivity (number of accredited degree programs, number of new courses introduced at the university, and number of supervised theses (Bachelor, Master, PhD)) is judged. Concretely, in Slovakia, the assignment of the Associate Professor title consists of a public habilitation lecture and four procedural steps carried out at the faculty (Faculty Scientific Board, Dean) and at the university (Vice-Rector, Rector). Assigning a Professor title is even more complicated. It is subject to successful self-advocacy (via two inauguration lectures) and approval of the following subjects: Faculty Scientific Board, Vice-Dean, guarantor, Dean, Vice-Rector, University Scientific Board, Rector, Ministry of Education, and President of the Slovak Republic [97]. The motivation for completing these procedures is not only to earn a degree, but also to earn a higher financial reward and a higher degree of autonomy in both scientific and educational areas. Polish procedures are very similar. However, such demanding requirements should be mitigated and accompanied in particular by a positive and motivating approach by university management. In contrast, Table 2 shows that only 67.78% of Slovak respondents expressed that the platform for autonomy is given to them, and 60% of respondents feel utilization of good relationships and atmosphere.

All of the above studies underline the importance of academic motivation; at the forefront are university-staff motivation for high-quality (professional) work, and the motivation for submitting new suggestions and increasing the effectiveness of the education process.

## 5. Conclusions

Applying basic sustainability characteristics (persistence, future orientation, societal profit, responsibility, etc.) and linking them with the content and characteristics of academic motivation (of teachers, administrators, and managers), sustainable academic motivation can be understood from several viewpoints. In this article, sustainable academic motivation is defined as the most important component of conscious behavior; as the starting point of a behavior; as the accelerator of behavior and development; as the process; and as the resultative level of all motivational efforts and powers at a higher education institution. Although the mentioned viewpoints were stated on the basis of the authors' own experience and the survey results presented in Section 3, they were supported by the opinions of other theorists and higher-education practitioners.

Sustainable academic motivation should be understood as an urgent and unique challenge for future advancement in higher education. For sustainable progress, it is a great opportunity to build such motivation that draws renewing strength from its very nature and is strong enough to impact and attract new members of the academic environment, both students and staff.

Inspirations and potential measures through which sustainable academic motivation can be correctly and acceptably perceived (presented in Section 4.1), and that help gradually build sustainable academic motivation at higher-education institutions, can be categorized into five perspectives or pillars:

- (1) Sustainable academic motivation is perceived as most important component of conscious behavior. It is necessary to explain the importance of teacher motivation in relation to student motivation, and, above all, the importance of manager motivation in relation to the motivation of other staff members and students. Convincing communication and explanation of the positive impact of motivational behavior (via targeted presentations, workshops, university meetings, face-to-face events, etc.) should become a regular part of academic life.
- (2) To ensure that sustainable academic motivation becomes the starting point of a behavior. It is necessary to carry out justified challenges inspiring the initial implementation of motivated and motivating behavior into previous behavioral patterns of all university members. This is possible through, for example, a series of university projects, grants, and other forms of support. Grant schemes should also encourage technically focused individuals who have insufficient experience with motivating themselves and others. Schemes can also appropriately instruct those who do not believe in the successful transfer of enthusiasm from motivating person to the motivated.
- (3) To achieve a state in which sustainable academic motivation becomes the accelerator of behavior and development. It is appropriate, for example, to reward positive manifestations of motivated behavior, provide counseling assistance in cases of insufficiently handled motivational dynamics (initial verve versus real possibilities of environment and involved personalities), provide support for development efforts (access to publication and citation databases, financial coverage of participation in international congresses and conferences, remuneration for major publications and patents, etc.), and eliminate unnecessary administration and bureaucracy at universities, faculties, and departments.
- (4) To properly implement the process through which sustainable academic motivation is built. It is necessary to carry out precise analysis of existing university motivational systems, gain willingness and proposals of appropriate motivational (relational, material, financial, time) measures from students and employees of all categories, develop an initial proposal of the university's motivation goals and motivation strategy, discuss the proposed documents in the university and prepare their final versions, develop a sequence of motivational programs (university, faculty, departmental, individualized programs) and implement them, and continuously provide feedback on the effectiveness of motivational activities.
- (5) To achieve a state in which sustainable academic motivation results in unique, persistent, and output-successful connections of all motivational efforts and powers at the institution.



It is necessary to constantly identify opinions, levels of satisfaction, and the inspiration of all members of the academic community, promptly implant them in all university systems (motivational, social, educational, developmental, cultural, and informational), regularly and correctly carry out appraisal and especially motivational interviews, perform bench-learning and bench-motivating, appreciate the synergies of combined motivational efforts, and create conditions for motivational multiplications.

For the higher efficacy of all measures and decisions, it is desirable to identify potential symptoms of overwork, depression, and burnout syndrome, and definitely eliminate all forms of dishonest behavior, underestimation, humiliation, frustration, eventual aggression, and psychological pressure. In such cases, all motivational tools, measures, events, activities, and assistance have a real chance to contribute to building sustainable academic motivation.

In view of the potential contributions and implications of this article, it is needed to indicate a possible link between the findings on motivation in academic environments and those on motivation in other types of organizations. Many studies (presented and discussed in the article) suggest that, although employees of different types of organizations (including universities) do different work, the structure of their motivation and its imperfections are very similar. The content and character of the performed work is crucial for each individual. However, it is perceived motivation that is the unifying and energizing element for all. From this point of view, the work itself can be a strong motivating or demotivating element. Moreover, while an individuals' work does not please them, they can logically justify its importance and positives, they can purposefully reveal its benefits, and accept its necessities. Through the skillful handling of self-motivation, the individuals can not only accept their job, but even enjoy it.

Of course, self-motivating must be continuously replenished by superiors' and other colleagues' encouraging (motivating) influences. If intrinsic motivation effectively meets extrinsic, the combination of sustainability and (academic) motivation can be fulfilled. In addition, the achieved sustainable motivation of some individuals can positively act on building sustainable motivation of other individuals and teams. Stated differently, the presented results in this article can also find successful applications in other types of both production and nonproduction organizations.

The geographical dimension of the conducted survey is also important to mention: The survey was conducted in two Slavic countries. Although Slavs are considered as a specific European 'nation' (characterized often by obligingness and modesty), the obtained results can also serve as inspirations for research teams in other countries. Indeed, exploring academic motivation, especially from the viewpoint of sustainability, requires global attention.

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