

TRENDS IN ROMANIAN UNIVERSITY SPORT – COMPARATIVE ANALYSIS

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Abstract: Practice sport is a right of every individual, regardless of race, sex, age, nationality, regulated in the Constitution of Romania Art. 45 pt. 5, where it is stated: “public authorities are obliged to contribute to ensuring the conditions for free participation of young people to the political, social, economic, cultural, and sports life of the country”. The goals of the university sport are identified with the general goals of the national physical education and sport system, adapted to the particularities of the three components: high-performance sports sport, physical education and sport for all practiced in the university environment. Romanian Athletics Federation (F.R.A.) has in its portfolio 44 world records, 15 Olympic records, 35 Olympic medals and over 350 European and world championship medals. In this framework, an important contribution has Romanian university athletics through the Summer Universiade results from 1959 to 2017. To highlight Romanian university athletics development and trends, we believe significant to apply comparative analysis at dynamic of performances obtained at the World University Games (Summer Universiade) and National University Championship, in correlation with the world performances level.

Keywords: university athletics, performance, competition, records, progress

1. INTRODUCTION

European values and norms related to sport, “considered a social phenomenon with a major impact upon modern society and deep implications in the formation and socializing of the individual, as well as in the general social development” [2], are reflected by the specific Romanian legal provisions, according to which „physical education and sport are activities of national interest and therefore supported by the state” [3]. We find that, within Romanian sport system, university sport can function as a relatively independent system. Nationally, during 1929–2016 students participated in 86 National University Championship (N.U.C.) editions. Internationally, Romania compete at summer Universiade since 1959, during the 29 editions held so far records is 136 medals including 46 gold, 40 silver and 50 bronze medals [4]. The study of the history and the evaluation of the participation of student athletes in the summer Universiade of 1959 – 2017 and the perspectives aim at revealing the dynamics of the results and their value, in order to determine the trend of such participations and therefore identify the international perspectives of Romanian university sports. This is done by correlating the results of student athletes in the summer Universiade and the National University Championships, with the value of performances worldwide. The objectives we envisaged in order to reach the purpose were the followings:

- The study of the references literature to document the investigated issues.
- Highlighting Romanian athletes student at summer Universiade during 1959–2017 on some indicators established in advance.
- Establishing the relationship between senior world records (WR) and university world records (WUR), M+W.
- Studying the relationship between senior national records (N.R.) and their university records (N.U.R.), M+W.
- Finding the relationship between W.U.R. and N.U.R. compared to that established between W.U.R. and N.R.
- Identifying limiting factors and favoring factors to develop the Romanian university athletics in terms of results achieved.
- Identifying prospects of the Romanian athletes student to participate in summer Universiade.

2. HYPOTHESIS

- The analysis of the dynamics of the results obtained by Romanian student athletes at the summer Universiade from 1959 till 2017 can reflect the progress, stagnation or regress of their performances. An objective approach of these phenomena can represent in the future an action vector for performance improvement.
- An insight in the relation between the level of world university records (W.U.R.) and the senior world records (W.R.) can shape the trend of athletics worldwide, and related to it, it is possible to assess the value of Romanian university athletics [5].
- If one compares the university athletic performances at national and international scale to the value of the W.U.R. and the W.R., it is possible to identify the near and medium term perspectives of Romanian university athletics.

3. MATERIALS AND METHOD

Bibliography study method, historical method, case study, comparison method and statistical and mathematical method. The first step of the research was to reveal the results of Romanian athletes student at

summer Universiade during 1959–2017 based on the following indicators: variation of total numbers of medals separately M and W, ranking first three editions of the summer University by medals value M+W and dynamic performance M+W custom samples [6]. The next step was the reporting of W.U.R. to W.R., N.U.R. to N.R., N.U.R. to W.U.R. and N.U.R. to W.R. seniors in 19 field events, using the 2016 I.A.A.F. and F.I.S.U. 2017 statistics, 2016 National university championship statistics (table 1, table 2) [7]

Table 1. Percentage ratio between different types of records – M

Field event	WR	WUR	%WR WR/WUR	NR	NUR	%NR NR/NUR	%WUR WUR/NUR	%WR WR/NUR
100m	9,69	10,07	96,22	10,21	10,71	95,33	94,02	90,47
200m	19,32	19,72	97,97	20,70	21,36	96,91	92,32	90,44
400m	43,18	44,81	96,36	45,60	45,79	99,58	97,85	94,30
800m	1,40,91	1,43,40	97,59	1,45,41	1,49,11	96,60	94,76	92,48
1500m	3,26,00	3,38,43	94,30	3,34,13	3,49,46	95,61	95,19	89,77
5000m	12,37,35	13,37,52	92,63	13,15,00	14,03,39	94,26	96,93	89,79
10000m	26,17,53	28,15,84	93,02	27,40,06	30,47,92	89,83	91,77	85,36
110mg	12,80	13,21	96,89	13,34	13,84	96,38	95,44	92,48
400mg	46,78	48,09	97,45	49,22	51,73	95,14	92,96	90,43
L.	8,95	8,40	93,85	8,37	7,95	94,98	94,64	88,82
T.	18,29	17,86	97,64	17,81	17,08	95,90	95,63	93,38
I.	2,45	2,41	98,36	2,40	2,19	91,25	90,87	89,38
P.	6,14	5,80	94,46	5,50	4,75	86,36	81,89	77,36
G.	23,12	21,11	91,31	20,84	17,19	82,48	81,43	74,35
S.	98,48	87,42	88,76	81,88	71,35	87,31	81,61	72,45
D.	74,08	69,46	93,76	68,12	61,98	90,98	89,23	83,66
C.	86,74	82,77	95,42	77,60	66,81	86,09	80,71	77,02
4x100m	36,84	38,42	95,88	39,21	41,47	95,17	92,64	88,83
4x400m	2,54,29	3,00,40	96,61	3,04,23	3,18,87	92,63	90,71	87,64

Table 2. Percentage ratio between different types of records – W

Field event	WR	WUR	%WR WR/WUR	RN	NUR	%NR NR/NUR	%WUR WUR/NUR	%WR WR/NUR
100m	10,49	11,0	95,36	11,30	11,84	95,43	92,90	88,59
200m	21,34	21,91	97,40	22,35	24,10	92,73	90,91	88,54
400m	47,60	49,88	95,43	49,88	53,50	93,23	93,23	88,97
800m	1,53,28	1,56,88	96,92	1,55,05	2,04,94	92,08	93,54	90,66
1500m	3,50,46	4,01,32	95,50	3,53,96	4,15,88	91,61	94,31	90,06
5000m	14,11,15	15,28,78	91,64	14,31,48	16,23,40	88,61	94,45	86,55
10000m	29,31,78	31,46,43	92,94	31,11,24	32,55,37	94,72	96,51	89,69
100mg	12,21	12,62	96,75	12,62	13,48	93,62	93,62	90,57
400mg	52,34	53,95	97,01	53,25	53,96	98,68	99,98	96,29
L.	7,52	7,04	93,62	7,43	6,50	87,48	92,32	84,43
T.	15,50	14,81	95,54	15,16	14,23	93,86	96,08	91,80
I.	2,09	2,01	96,17	2,02	1,81	98,60	90,04	86,60
P.	5,06	4,70	95,55	4,22	3,76	89,09	80,00	74,30
G.	22,63	20,82	92,00	21,00	19,02	90,57	91,35	84,04
S.	72,28	69,82	96,59	65,08	62,22	95,60	89,11	86,08
D.	76,80	67,96	88,49	73,84	65,60	88,84	96,52	85,41
C.	79,42	75,83	95,47	76,07	69,42	91,25	91,54	87,40
4x100m	40,82	42,40	96,27	44,18	47,37	92,87	89,13	85,81
4x400m	3,15,17	3,24,97	95,22	3,25,78	3,49,53	89,65	89,30	85,03

4. RESULTS AND DISCUSSION

The university competition was founded as the World University Games. The competition was organized for the first time in 1957, the athletics competition were included in the first edition and our documentation shown that Romania participates in athletics competition since 1959. The study about Romanian student's athletic performance at the 29 editions of the competition which has changed its name in 1961 as summer Universiade highlights the following:

- number of medals in men's field events is 28: nine gold medals, 7 silver medals and 12 bronze medals;
- number of medals in woman's field events is 107: 36 gold medals, 33 silver medals and 38 bronze medals;
- after the value of the medals in the men's standings the first three editions are as follows: 1973 – three gold medals; 1975 – one gold medal, two silver and two bronze medals; 1981 – two silver and three bronze medals;
- dynamics of performance at men's on custom samples shows best results at javelin throw with two gold medals and one bronze, followed by 10 000 m with a gold medal, 2 silver medals and one bronze medal and the third place by 5000 m with one gold medal and 2 silver medals;

- after the value of the medals in the women’s standings the first three editions are as follows: 1999 – five gold medals, one silver medal and 3 bronze medals; 1995 – 4 gold and 3 silver medals; 1987 – 4 gold medals, one silver and one bronze medal;
- dynamics of performance at women’s on custom samples shows best results at 1500 m with 6 gold medals, 8 silver and 3 bronze medals, followed by long jump with 4 gold medals, 5 silver and 6 bronze medals and the third place by 3000 m with 5 gold medals, 2 silver medals and one bronze medal; Nationally we took into account the performance level of the romanian athletes’ student at the 2016 edition of N.U.C. and N.U.R. values in 2016 and we have reported to W.U.R. and W.R. value 2016. Processing results show the following:
- in woman’s field events, N.U.R. represent 92,55% from N.R., 87,21% from W.R. and 92,36% from W.U.R.;
- in men’s field events, N.U.R. represent 92,72% from N.R., 86,71% from W.R. ad 91,08% from W.U.R.

In the men’s field events, W.U.R. value represent 95,18% from W.R. In 47,36% – 9 of the studied men’s field events, W.U.R. represent over 96% of the W.R., in 21,05% – 4 field events, is over 94%, in 26,31 – 5 field events W.U.R. represent over 90% of the W.R., while under 90% goes 5,26% – 1 from all field events analyzed. Summarizing percentages, the highest value is found in high jump, where W.U.R. value is 98,36% from W.R.: 2,41 m to 2,45 m. Weakest value is at javelin throw, where W.U.R. is 10,6 m lower than W.R. value (Figure 1).

In woman’s field events W.U.R. representing 94,94% of W.R., with values between 97,40% at 200 m and 88,49% at discus throw. At 36,84% from field events, respectively 7 of 19 W.U.R. is over 96% from W.R., equal with the 94%, while in 21,05% – 4 field events, W.U.R. value is over 90% from W.R. In discus throw W.U.R. represent under 90% from W.R.: 67,96 m than 76,80 m, 9,04 m lower than W.R. (Figure 2).

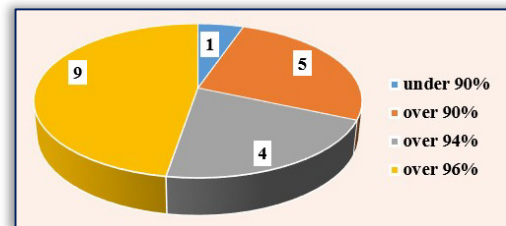


Figure 1. Report W.U.R./W.R. – Athletic events M

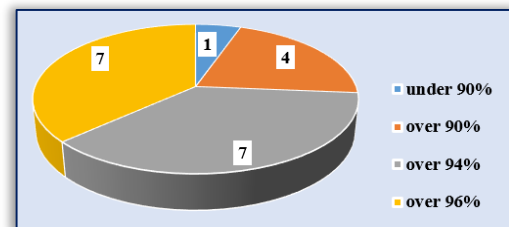


Figure 2. Report W.U.R./W.R. – Athletic events W

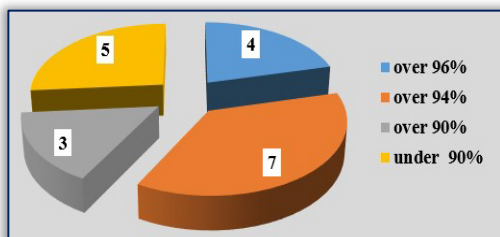


Figure 3. Report N.U.R./N.R. – Athletic events M

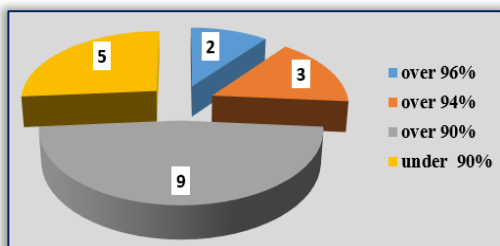


Figure 4. Report N.U.R./N.R. – Athletic events W

In all men’s field events analyzed N.U.R. represent 91,08% of W.U.R. value, where N.U.R. is in 10,52% – 2 field events over 96% from W.U.R., in 31,57% – 6 field events, N.U.R. represent over 94% from W.U.R., equality with the 90% percentage and in 26,31% – 5 field events N.U.R. is under 90% from W.U.R. The highest value N.U.R. to W.U.R., 97,85% is found at 400 m, 45,79 to 43,18, with 2,61 s higher. The lowest male value is at hammer throw where N.U.R. is 80,71% of W.U.R., with 19,93 m lower (Figure 5).

Regarding N.U.R. values compared with W.U.R. in woman’s field events, N.U.R. represent 92,36% from W.U.R. In 21,05% – 4 field events, N.U.R. is over 96% from W.U.R., in 10,52% – 2 field events, N.U.R. represent over 94% from W.U.R., in 47,36% – 9 field events, N.U.R. is over 90% and in 21,05% – 4 field events, N.U.R. is under 90% from W.U.R. The highest value was recorded at 400 m hurdles with a ratio of 98,68%, while the worst performance is registered at pole vault jump where N.U.R. is only 80% of W.U.R. (Figure 6).

Further

investigative approach we determined the level of national athletics university performances by establishing the report between N.U.R and N.R. in 2016 [8]. The situation in men’s field events highlights the value of N.U.R. representing 92,72% from N.R. Thus, in 17 of field events, the value of N.R. is major N.U.R., the highest percentage was recorded at 400 m, field event where N.U.R. represent 99,58% from N.R. In 21,05% – 4 of studied men’s field events, N.U.R. is over 96% from N.R., in 36,84% – 7 field events, N.U.R. represent over 94%, in 15,78 – 3 field events% is over 90% and in 26,31% – 5 field events, the value is under 90% from N.R. The lowest value is at shot put, where N.U.R. is lower with 3,65 m than N.R. [9] (Figure 3).

In woman’s field events ratio analysis reveals the following: in 10,52% – 2 of field events N.U.R. value is over 96% of N.R., in 15,78% – 3 field events is over 94% , in 47,36% – 9 field events, N.U.R. value represent over 90% of N.R. and for 26,31% – 5 field events, N.U.R. value is under 90% of N.R. (Figure 4).

Report at N.U.R. men's field events to W.R. shows us that in 10,52% – 2 field events N.U.R. is over 93% from W.R., in 26,31% – 5 field events, N.U.R. is over 90% from W.R., in 42,10% – 8 field events, N.U.R. represent over 80% from W.R. and in 21,05% – 4 field events, N.U.R. is under 80% from W.R. The most valuable male performance is at 400 m, 45,79 representing 94,30 of W.R. value, the weakest is javelin record, 72,45% of W.R. (Figure 7).

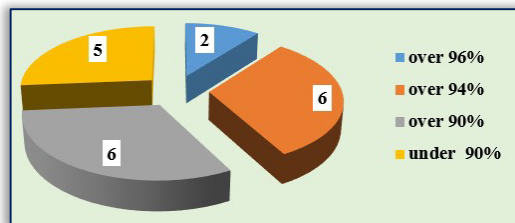


Figure 5. Report N.U.R./W.U.R. – Athletic events M

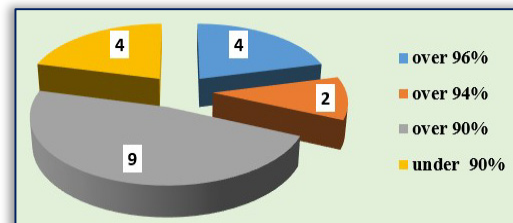


Figure 6. Report N.U.R./W.U.R. – Athletic events W

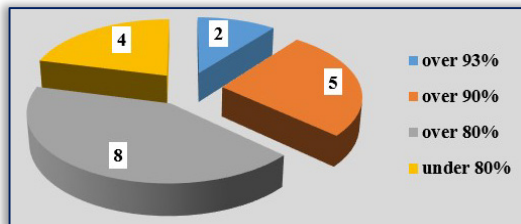


Figure 7. Report N.U.R./W.R. – Athletic events M

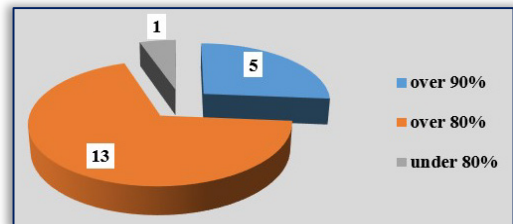


Figure 8. Report N.U.R./W.R. – Athletic events W

In the women's field events, N.U.R. represents 87,21 from W.R. value. At this category only in 26,31% – 5 field events, N.U.R. is over 90% from W.R., in 68,42% – 13 field events, N.U.R. represent over 80% from W.R. and in 5,26% – 1 field event, N.U.R. is under 80% from W.R. (Figure 8).

5. CONCLUSIONS

- Today, W.U.R. represents 95,18% at man's and 94,94% at woman's of W.R. seniors value. This demonstrates that world university athletics is close in value of world athletes elite.
- The university national records in 2016 represent 92.36% for women and 91.08% for men of the value of the W.U.R., which leads to the conclusion that the value of the Romanian student athletes is below the world level of student athletics. We consider that the causes of this phenomenon are various and they restrict performance: the absence of valuable student sportsmen in the national university competitions, the lack of organizational autonomy of university sport, the hesitating approach of university sports as distinct activity in the context of the other specific activities within the national system of physical education and sports, the secondary place occupied by the subject Physical Education in non-profile higher education institutions, the performance standards used in classifications by fields of study do not give any point for university sports results, the weak role of the informational sub-system, caused by the inexistence of a database, the low motivation of students and technical human resources for practicing university performance athletics, scheduling the university national championships too early in the home competition calendar, the need to rent sports bases for the training, which cuts down the financial resources, the lack of a "brand image", financial vulnerability.
- National university records poorer women are inferior N.R. seniors representing 92,72% at men's and 92,55% for woman's.
- Romanian athletics participation balance after the 29 editions of summer Universiade lies this branch of sport to the level of efficiency with 4,96 medals per edition M+W, 134 medals M+W out of 684 total medals in Romanian sports fields. „Record edition” was in 1981 with a number of 15 medals M+W. The men's students have won medals at 13 summer Universiade editions, with a high level of performances at 1975, 1979 and 1981 editions, through javelin throw, 5000 m and 10 000 m. The woman's Romanian athlete's students have won medals in all 27 editions of the summer Universiade. The most valuable female results were recorded in the editions of 1987, 1995 and 1999 at 1500 m, 3000 m and long jump.
- From the perspective obtaining medals after the last five editions of the summer Universiade we found at men a downward trend with a gold medal compared with upward trend at women by getting 11 medals: one gold medal, 3 silver and 7 bronze medals [10].
- Regarding the performance level after the last five editions of this world competition, we note the improvements to the N.U.R. at following athletic events: long jump M with 0,9 m, 800 m W with 4,88 s, 5000 m W with 9,39 s, and hammer throw W with 1,76 m [11].

- Our researches allow us to state that university athletic performances can have in the future a positive trend if the following favorable factors are considered: the sports tradition of university athletics, reconsidering the social, cultural and economical role of sports and the necessity to finance it according to the principles stipulated in the European Sports Charter; generation of own financial resources by the improvement of the marketing activity of the decision makers in the profile and non-profile higher education institutions, which means: renting spaces within the local, regional, national and international university sports bases in order to attract spectators and sponsors, redirecting the 2%, creating sports products and/or materials meant for merchandising, paid sports apprenticeship, paid specialty consulting, etc., approving the initiative of introducing the subject Performance Sports into the didactical norm of professors and coaches from profile and non-profile higher education institutions, in correlation with its value.

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