

RUGBY WORLD CUP 2003
UNDER 21 WORLD CHAMPIONSHIP
UNDER 19 WORLD CHAMPIONSHIP

A statistical comparison

INTRODUCTION

The objective of this report is to look at all major elements of play in the three tournaments and to note similarities and highlight differences.

(note: In order to do this, an adjustment has to be made to the Under19 figures. This is because the Under19 game lasts 70 minutes while the other two last 80 minutes. In order to get over this problem and produce meaningful comparatives, a notional adjustment has been made to some of the Under19 data. What this means is that whenever an event has a relationship to time e.g. a lineout, then an upwards adjustment of 1/7th has been made to the total figure. In the case of the lineout, this results in the actual Under19 lineout figure of 27 being increased to 31 for comparative purposes. When this has been done, an asterisk (*) has been noted next to the adjusted figure. This means that the data produced on all 3 tournaments has been based on 80 minute games albeit one of them – the Under19 Championship, containing a notional adjustment).

The main areas of similarity and difference are outlined in the following commentary. This is then followed by a more detailed comparison of the 3 tournaments.

COMMENTARY

When looking at the 3 comparative figures, it soon became clear that it was the **similarity** between the 3 sets of data – as opposed to any differences – that characterised the results.

1 Similarities

In many – and indeed in most – of the core areas of the game, there was little if any difference between any of the three. **In terms of average points per game, tries, lineouts, scrums, number of passes and penalties awarded, the data was all but identical.** The extent of these similarities is shown in the following table:

	RWC03	UNDER21- 04	UNDER19 04
Points average per game	59	54	56*
Tries average per game	6.9	7.2	7.2*
Tries preceded by 3 or less passes	50%	51%	52%
Tries preceded by 3 or less rucks/mauls	83%	84%	80%
Lineouts average per game	33	32	31*
Lineout possession retained	80%	78%	79%
Scrums average per game	21	22	22*
Scrum possession retained	91%	87%	90%
Penalties awarded incl f/k	24	25	27*
Passes average per game	241	225	226

Ball in play time – another interesting comparative – was also similar, with the average ball in play in each of the three tournaments being as follows:

	<u>Ball in play</u>
RWC03	42%
Under21	41%
Under19	38%

Further examination of the Under19 percentage brought these figures even closer together. This is because in the Under19 tournament, it appeared that times taken for substitutes, talking to players and water breaks had not been added on. Had this been done, the overall ball in play time of the Under19 Tournament would have been within just a percentage or two of RWC03 and the same as Under21.

2 Major differences

There were, nevertheless, in certain areas, clear differences. These arose almost certainly from the fact that at Rugby World Cup – as opposed to the other two tournaments - all but a few players were full-time professionals. In the Under21's, there was a mixture – there was the occasional full time professional, a number of semi-professional players but the majority were amateurs. At Under19 level, on the other hand, while there may have been academy players, the vast majority were totally amateur.

When comparing, therefore, the performances of teams of full time professionals with teams of amateurs, differences in the level of skill and intensity could be expected. This was indeed the case. There were, for example, noticeably **fewer rucks/mauls at Under19 level** :

	<u>Average per game</u> RUCKS/MAULS
RWC03	136
Under21	134
Under19	109*

Kicking was also better in the professional game as shown below:

	<u>conversion</u> success rate	<u>penalty</u> success rate
RWC03	73%	71%
Under21	60%	62%
Under19	68%	61%

(note: Such kicking percentages could go some way to explaining why there were fewer drop goals kicked in the junior tournaments - **0.2** and **0.1** compared with **0.5** in RWC03)

This combination of greater intensity and better kicking illustrated above was further manifested when looking in detail at the results of matches played in the final stages of the three competitions.

The scoring profiles of the semi-finals and final of RWC03 were compared with the 3 matches that decided the top 6 places in each of the other tournaments. (note: it had to be done this way since there are no knock out stages at Under21 and Under19 level).

The results were very different as shown below:

RWC03	total tries	5	total penalty goals	19
Under21		24		12
Under19		27*		9*

The above figures show that **while the number of tries and penalty goals is the same at all stages of both the Under21 and Under19 tournaments, it is far different in RWC**. There, the scoring in the final three matches are noticeably different from those played in the earlier group stages.

Despite this however, tries were still the major factor in determining the winning team in all three tournaments:

in RWC03, **81%** of matches were won by the team scoring most tries.
In Under21, **73%** of matches were won by the team scoring most tries.
In Under19, **90%** of matches were won by the team scoring most tries.

The final area of material difference concerns penalties.

There was a **noticeable difference in the number of free kicks awarded for crooked feeds**;

in RWC03, **1 was awarded for every 202 scrums**
in Under21, it was **1 in every 66 scrums**
in Under19, it was **1 in every 80 scrums**

Similarly, red and yellow cards showed differences.

In RWC03 there were **no red cards**. However, at Under21 level there were **2**, and at Under19 there were **4**.

Yellow cards also showed a difference with the rate of issue at Under19 level being almost double that seen in RWC

RWC03 **1 in every 1.7** games
Under21 **1 in every 1.0** games
Under19 **1 in every 0.9** games

There was one final difference regarding penalties. While more – but not significantly more – were awarded at junior level, there was a **far greater spread of match penalties at Under21 level** as shown below

	Most penalties in a game	least in a game
RWC03	34	15
Under21	50	14
Under19	35*	16 *

These differences aside, the number awarded and the reasons for their issue were broadly similar in all three tournaments.

Other differences

The major and most noticeable differences between the three tournaments have been noted above. There were however other less significant differences – not so much between the 2 junior tournaments and the senior one but between all three or two of the three. Examples are

- at Under21 level, significantly more tries started from within the scoring team's own half
- conversely, at RWC03 and Under19, a far greater proportion of tries started within 22m of the goal line
- at Under19 level, restart kicks were kicked shorter and more possession was retained by the kicking team.

These small differences and others are expanded upon in the detailed comparison that follows.

Whether or not they will become of significance in due course, it is too early to say. Many of them could simply be a reflection of the year in year out differences that occur within the same competition. This will however become clearer in the future when it will be possible to look at consecutive years of the Under21 and Under19 competitions to see if such small differences are, in effect, particular characteristics of the game at those levels.

DETAILED COMPARISON

1 Scoring

The average number of points per game in each of the three tournaments was very similar:

RWC03	59 points
Under21	54 points
Under19	56*points

The make-up of the points was also similar:

RWC03	6.9 tries	4.3 penalty goals
Under21	7.2 tries	3.0 penalty goals
Under19	7.2 tries*	3.3 penalty goals*

What was different however was the scoring profiles at the final stages of the tournament. In RWC03 these matches – the 2 semis plus the final – produced 5 tries and 19 penalty goals, or almost 4 penalty goals to every try. The two junior tournaments were quite different.

Because the Under21 and Under19 championships do not have a final/semi-final format it was decided to look at what could be termed their equivalent matches – the 3 matches deciding the top 6 places. These produced a totally opposite profile as shown below:

RWC03	5 tries	19 penalty goals
Under21	24 tries	12 penalty goals
Under19	27 tries*	9 penalty goals*

The conclusion is that the major increase in penalty goals – and major reduction in tries – seen in the final stages at RWC is not replicated in the 2 junior tournaments. In the junior tournaments, the preponderance of tries and penalty goals is the same at all stages of the tournament.

Overall, however, tries are still the major factor in determining the winning team in all three tournaments:

in RWC03, **81%** of matches were won by the team scoring most tries.
In Under21, **73%** of matches were won by the team scoring most tries.
In Under19, **90%** of matches were won by the team scoring most tries.

2 source of tries

The possession source from which tries were scored were broadly similar in all 3 tournaments. The set pieces of lineout and scrum accounted for around 50%:

	<u>lineout possession</u>		<u>scrum possession</u>	=	
RWC03	26%		27%	=	53%
Under21	29%		20%	=	49%
Under19	29%		18%	=	47%

With regard to origin of tries – ie the position on the pitch where tries started, in the Under21 tournament, many more tries started from within the scoring team's own half than in the other two competitions:

Tries scored from own half

RWC03	23%
Under21	32%
Under19	20%

Not surprisingly therefore, in RWC03 and Under19, more tries originated from within 22 metres of the try line than at Under21 level

Tries scored within 22m

RWC03	44%
Under21	36%
Under19	44%

3 build-up to tries

When tries are scored, they are almost always preceded by a number of passes and/or rucks and mauls(referred to as '2nd phases'). All three tournaments showed similar profiles:

% of tries preceded by 3 or fewer 2nd phases

RWC03	83%
Under21	84%
Under19	89%

% of tries preceded by 3 or fewer passes

RWC03	50%
Under21	51%
Under19	52%

In all three tournaments, twice as many penalty goals were kicked in the first half than the second half, and most tries were scored in the second half of the game.

4 kicking

As expected, kicking success rates are greater in the senior game as shown below:

	<u>conversion</u> success rate	<u>penalty</u> success rate
RWC03	73%	71%
Under21	60%	62%
Under19	68%	61%

This could go some way to explaining why there are fewer drop goals kicked in the junior tournaments compared with RWC. While the average number kicked per game in RWC03 was **0.5**, the figures for Under21 and Under19 were **0.2** and **0.1** respectively.

5 ball in play

The average ball in play in each of the three tournaments was as follows:

	<u>Ball in play</u>
RWC03	42%
Under21	41%
Under19	38%

These 3 figures, which are similar, hide one – although not major - difference relating to the spread of ball in play times in the Under19 tournament. The following table illustrates this:

	<u>Lowest BIP</u>	<u>Highest BIP</u>
RWC03	36%	47%
Under21	35%	48%
Under19	29%	46%

Because the Under19 figure was exceptionally low, enquiry was made and it appeared that times taken for substitutes, talking to players and water breaks had not been added on. Had this been done, the overall ball in play time of the Under19 Tournament would have been within just a percentage or two of RWC03 and Under21.

6 activity cycles

Activity cycles comprise rucks and mauls, passes and kicks. The average per game in each of the three tournaments was as follows:

	Average per game		
	RUCKS/MAULS	PASSES	KICKS
RWC03	136	241	52
Under21	134	225	48
Under19	109*	226*	42*

There is little difference between the RWC03 and Under21 tournaments. The only noticeable difference is at Under19 level where rucks/mauls are some 25% less. A suggestion here is that because professional players inevitably play with greater intensity, it is expected that there would be more contact and as a result more rucks and mauls.

The overall similarity is confirmed when looking at the most and fewest rucks /mauls and most and fewest passes created by any one team in a match. All 3 tournaments are very similar:

	<u>Most r/mauls by a team in a game</u>	<u>fewest by a team in a game</u>
RWC03	126	32
Under21	113	31
Under19	114*	33*

	<u>Most passes by a team in a game</u>	<u>fewest by a team in a game</u>
RWC03	264	32
Under21	212	31
Under19	203*	33*

The percentage of passing movements containing two or fewer passes were also similar;

RWC03	83%
Under21	82%
Under19	77%

7 restarts

A record is maintained of the percentage of restarts that are kicked so that they are contestable by the kicking team and then the subsequent success rate of the kicking team in regaining possession.

The 3 sets of figures are as follows;

	<u>Number of restarts contestable</u>	<u>possession retained</u>
RWC03	1 in 4	1 in 8
Under21	1 in 3	1 in 10
Under19	1 in 2.5	1 in 7

The Under19's therefore are inclined to kick more short restarts - and as a result manage to regain possession more successfully than teams in the other 2 tournaments.

8 lineout

There was little if any difference between the 3 competitions with regard to the number of lineouts. They were as follows;

RWC03	33
Under21	33
Under19	31*

There were however slight differences in the percentage of lineouts that were competed and the percentage of possession retained by the throwing in team. The differences were however no more than could be expected in comparing a similar tournament form one year to the next.

	<u>% competed</u>	<u>% possession retained</u>
RWC03	61%	80%
Under21	71%	78%
Under19	64%	79%

9 scrum

There was even less difference in the number of scrums seen in each competition and in possession retained:

		<u>possession retained</u>
RWC03	21	91%
Under21	22	87%
Under19	22*	90%

There were however slightly fewer collapsed scrums at Under19 level than in RWC03 and Under21. The figures were one in 9 compared with one in 7 and one in 6 at RWC03 and Under21 level. This may well be the result of the different scrummage laws that apply at Under19 level.

10 penalties

The average number of penalty goals per game were within 3 of each other:

RWC03	24
Under21	25
Under19	27*

The reasons for penalties were also similar. The following table gives the percentage for on ground tackle offences and the percentages for the set pieces of scrum and lineout. There were marginal differences only in offside penalties:

	r/t offences	scrum	lineout	offside
RWC03	46%	13%	4%	19%
Under21	40%	15%	7%	22%
Under19	41%	16%	4%	16%

There was however a noticeable difference in the number of free kicks awarded for crooked feeds;

In RWC03, 5 were awarded in 48 matches or **1 in every 202 scrums**
 In Under21, 10 were awarded in 30 matches or **1 in every 66 scrums**
 In Under19, 6 were awarded in 25 games or **1 in every 80 scrums**

In the 3 tournaments, over 2,100 scrums were awarded and 21 free kicks were awarded for crooked feeds. **This gives a ratio of 1 free kick for every 100 scrums**

10 red and yellow cards

There were however differences in both the incidence and reasons for red and yellow cards in the 3 competitions.

In RWC03 there were **no red cards**. However, at Under21 level there were **2**, and at Under19 there were **4**.

Yellow cards also showed differences:

RWC03	28	in 48 games or 1 in 1.7 games
Under21	30	in 30 games or 1 in 1.0 games
Under19	28	in 25 games or 1 in 0.9 games

The rate of issue at Under19 level was therefore almost double that seen in RWC03.

There was also a difference between the reasons for the issue of the yellow cards:

In RWC03, 13 out of 28 were for foul play offences – or **46%**

Under21, 11 out of 30 were for foul play offences - or **37%**

Under19, 18 out of 28 were for foul play offences – or **64%**

Whatever the reasons for these differences – be it players, referees or a mixture of both, it is clear that foul play offences accounts for around 50% of all yellow cards that are issued.