

Football Economics |Brief

Under-21 performance a leading indicator of international success

The pressure on England to perform in major tournaments has now extended to a close scrutiny of their progress at under-21 level. Meanwhile, Spain's victory in last June's UEFA European under-21 tournament could be an omen of an extended international dominance – but do successes in these tournaments translate into senior side success?

We have analysed the relationship between under-21 performances and subsequent senior-side success since the biennial tournament began in 1978 and find that:

- **European under-21 performance is a leading indicator of future success**

Over half of the nations that reached an under-21 semi-final went on to reach a World Cup or European Championship semi-final within 8 years and

Over one in three nations triumphant at under-21 have gone on to senior-side victory at a major tournament within 12 years

- **England's only under-21 triumphs in 82' & 84' preceded some senior side success** but only 2 members of the 1990 World Cup squad featured in the final of either of those under-21 victories

England's under-21 success in 2007 and 2009 tournaments, when they reached the semi-final and final respectively, imply it's more likely than not that the senior team will make a semi-final appearance before 2016

- **Italy are the most successful European under-21 side over the past three decades** with five victories – and are the only under-21 winners to go on to win a major tournament within 8 years

The remainder of this brief sets out the three elements of our analysis – the subsequent performance of successful under-21 sides; an examination of England's under-21 and senior performance; and a look at the under-21 pedigree of European sides that won the World Cup or European Championship.

Notes to editors:

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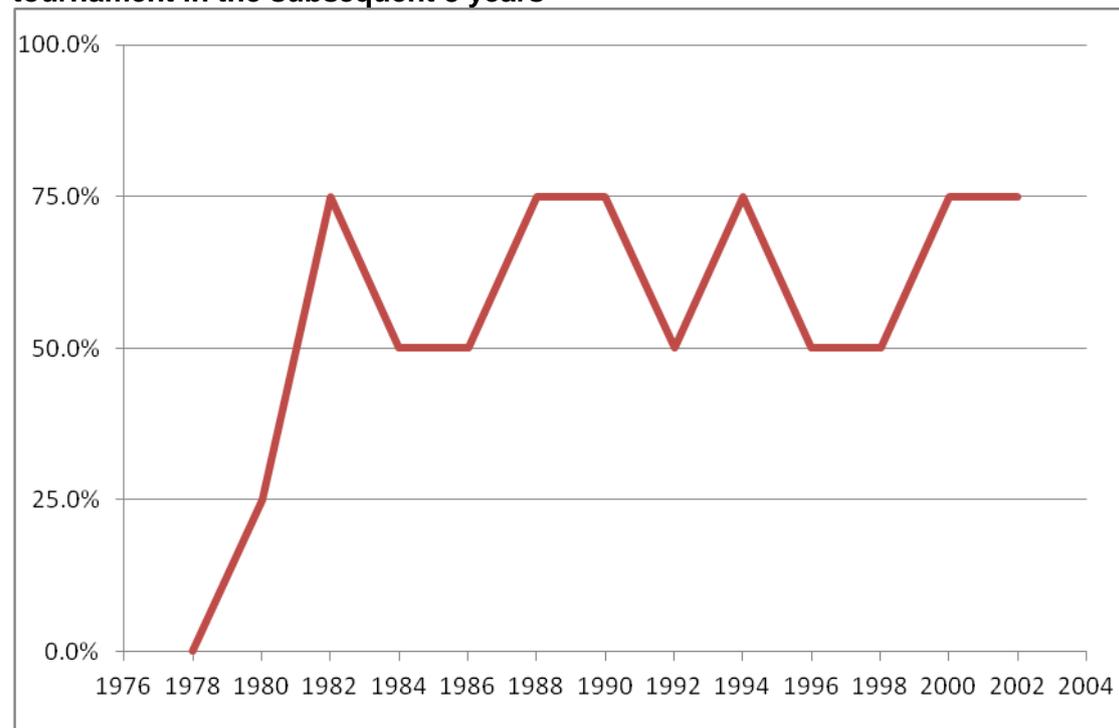
European teams successful at under-21 level

European under-21 performance is a leading indicator of future success

Looking at those European teams successful at under-21 level since the first tournament in 1978¹, we analyse their subsequent success (see annex for details) and find:

- Over half of the nations that reached an under-21 semi-final went on to reach a World Cup or European Championship semi-final within 8 years (see chart)
- Italy are the most successful under-21 side with five outright victories and are the only winners to go on to win a major tournament within the next 8 years
- Looking over a twelve year period, over a third of under-21 champions went on to win a major tournament

Under-21 semi-finalists – proportion finishing in the top 4 of a major senior tournament in the subsequent 8 years

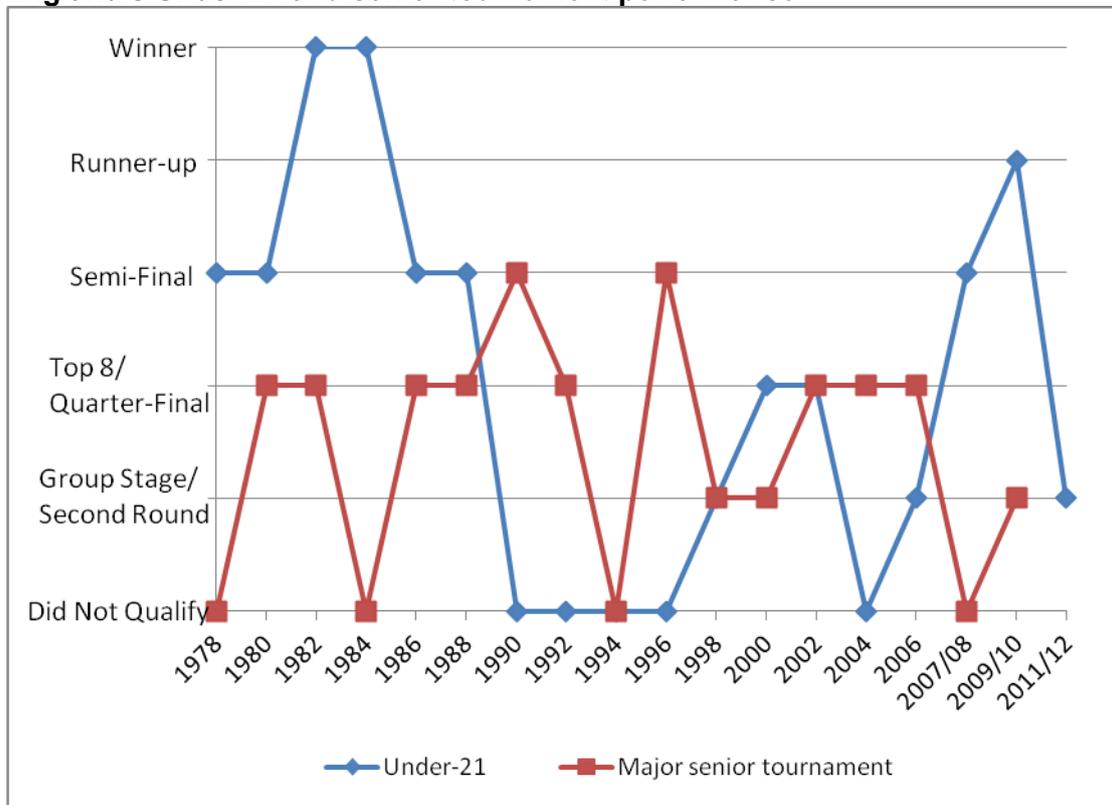


¹ Until 2007 the tournament was held in the same year as the World Cup and European Championship but now occurs in the years between the major tournaments.

England's performance

Focussing on England's performance, the chart plots the fortunes of England at under-21 and senior level over the past three decades

England's Under-21 and senior tournament performance²



England's 2009 under-21 final appearance was a rare success

- England's final appearance against Germany in 2009 was their best result since 1984 and their first foray beyond the quarter finals since 1988.

England's under-21 triumphs in 82' & 84' didn't translate into the senior equivalent

- Since the UEFA U21 tournament began in 1978 England's best showing – winning in 1982 & 84 - did precede the most successful senior side of 1990 (and, more arguably, 1996)
- But only two of the 1990 squad represented England in the Final of those under-21 tournaments³, so if there is a relationship, it doesn't appear direct and late development may be important⁴.

² For the under-21 line, in 1998 and 2006 England lost a play-off to enter the last eight, and we've scored this as reaching the group stage. After 2006, the under-21 tournament occurred in 2007, 2009 and 2011, rather than in the same year as the senior tournament

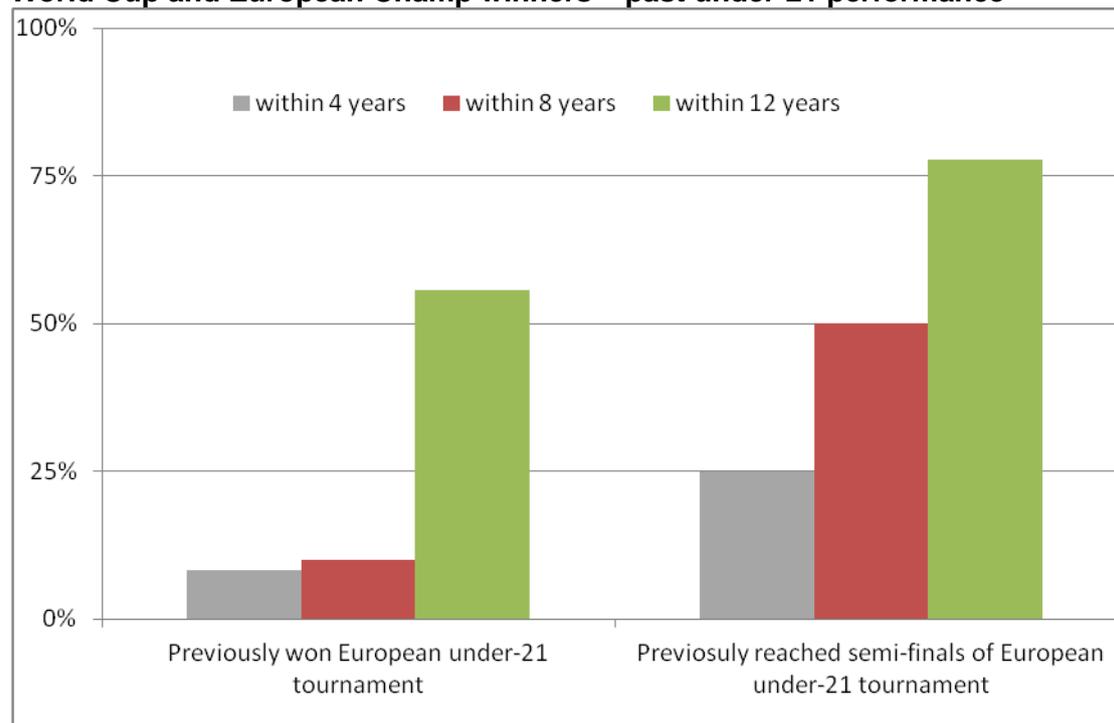
³ Gary Stevens played in both the 1982 and 1984 Final, Steve Hodge played in the former. Steve McMahon also played in the 82 quarter final. Source: RSSSF

⁴ Some players eligible for one of the 82' and 84' under-21 teams were involved in the senior squad (John Barnes and Mark Wright), and with Trevor Steven and David Seaman, were also involved in the qualifiers but not the Final team. Source: RSSSF

European winners of the World Cup and European Championship

Finally, we examine European winners of the World Cup and European Championship to see how many can look back on under-21 success. The chart looks at major tournament winners from Europe and whether their under-21 team won, or reached the last four, within the previous 4, 8 or 12 years.

World Cup and European Champ winners – past under-21 performance



Major tournament winners from Europe rarely have a recent under-21 pedigree

- Of the European winners of major senior tournaments, only 1 in 10 won the under-21 tournament in the previous eight years⁵ although over half had done so in the previous 12 years
- Looking at a broader measure of under-21 success, half had reached the semi-final of the under-21 tournament in the previous 8 years
- One of these was Greece, whose 'shock' European Championship win in 2004 was preceded by a final appearance in the under-21 version six years earlier
- Looking back further, just two out of nine European teams achieved a major tournament win without reaching an under-21 semi final in the previous decade⁶

⁵ Italy won the World Cup in 2006 after having won the under-21 European championship in both 2000 and 2004

⁶ Germany won Euro 1996 without making any impression on the semi-finals of the preceding six under-21 tournaments, and the same was true of Denmark in 1992 – although in

Conclusions

Under-21 success is a leading indicator of future senior performance

It's clear that under-21 success, as defined here, is related to the senior team's subsequent performance, although the relationship is very limited in the short-term. The observed effect might also miss the contribution of the best under-21 players if they've already graduated to the senior squad, and we identify this as an area for further analysis below.

And England success in 2007 and 2009 likely to lead to bigger things

If these patterns are a guide to the future, England's under-21 successes in 2007 and 2009, when they reached the semi-final and final respectively, imply it's more likely than not that the senior team will make a semi-final appearance before 2016. If England were unusual in resting key under-21 players in recent successes, then the chances of success could be higher.

But under-21 performance not a golden ticket

It's also notable that winning the under-21 tournament doesn't automatically lead to senior success – just over a third won a major tournament in the subsequent 12 years. In the case of England's early 80s victories and subsequent semi-final success, the overlap in players was limited. Whether this low 'graduation rate' is still a feature now, and for other successful under-21 nations, is another area for further analysis.

Further questions for analysis

These conclusions raise a number of questions about the role of under-21 national teams in developing players for senior international football. We've identified the following questions to be examined:

- How many senior England players 'graduated' from the under-21 squad? Has this been consistent over time? How does it compare to patterns in other countries?
- How much overlap is there between under-21 and senior teams across European teams? Do players routinely represent both sides?
- How many club games have other nations' players been involved in this year? Have other nations 'rested' under-21 players?
- What level do under-21 players play at by country? Is this relevant to their success (e.g. is playing domestically important, or at the highest level?)

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Denmark's case they did reach the semis in the under-21 tournament of the same year (ie 1992)

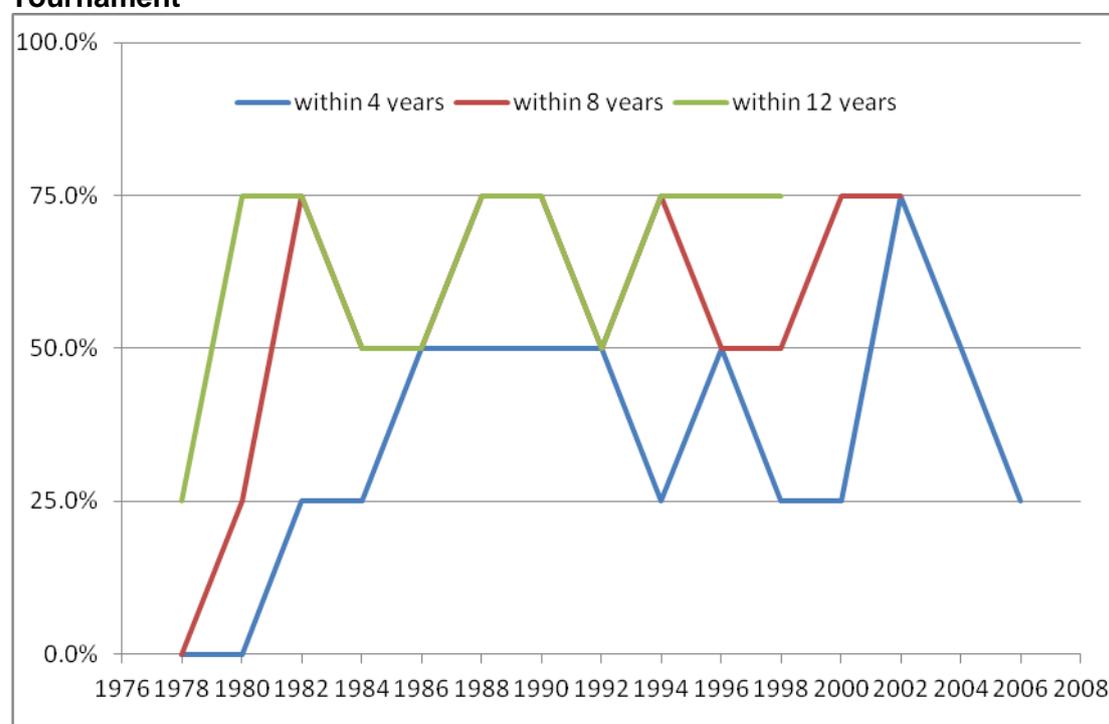
Annex 1: Our approach

We analysed the under-21 tournament performance from the first competition in 1978 and compared this with subsequent World Cups and European Championships. Football Economics takes care to use reliable sources and to check each calculation under-taken.

The figures and proportions reported above relate only to where complete data exists – so, for example, when examining under-21 winning teams that enjoy subsequent success in the next 8 years, the most recent under-21 tournament we could consider was in 2002.

The below table examines the semi-finalists of each under-21 tournament, and whether they reached the semi-final in the senior tournament within the subsequent 4, 8 or 12 years.

Under-21 semi-finalists - proportion finishing in the top 4 of a Major Senior Tournament



For example, taking the semi-finalists in 1978 (Yugoslavia, East Germany, England and Bulgaria) none of these teams reached the World Cup or European Championship semi-final in the subsequent 4 or 8 years, and just one of these teams (England in 1990) reached a semi-final in the subsequent 12 years.

By way of contrast, in 2002, three of the four teams reaching the under-21 tournament semi-finals, made an appearance in the senior team semi-finals within four years (Czech Republic, France and Italy but not Switzerland).

Annex 2: Selected background tables

Under-21 Semi-finalists and subsequent senior semi-finals

<i>U21 tournament</i>	<i>Senior Side Semi-final</i>		
	within 4 years	within 8 years	within 12 years
1978	0	0	1
1980	0	1	3
1982	1	3	3
1984	1	2	2
1986	2	2	2
1988	2	3	3
1990	2	3	3
1992	2	2	2
1994	1	3	3
1996	2	2	3
1998	1	2	3
2000	1	3	*3
2002	3	3	*3
2004	2	*2	*2
2006	1	*1	*1
Average for complete years	1.4	2.2	2.5
Average as Percentage of all semi-finalists	35%	56%	64%

Notes - * indicates partial data, not included in charts, totals or percentages

Under-21 tournament winners

<i>U21 tournament</i>	<i>Winners</i>	<i>Subsequent senior wins within 12 years</i>
1978	Yugoslavia	
1980	Soviet Union	
1982	England	
1984	England	
1986	Spain	
1988	France	2000
1990	Soviet Union	
1992	Italy	
1994	Italy	2006
1996	Italy	2006
1998	Spain	
2000	Italy	2006
2002	Czech Rep.	
2004	Italy	
2006	Netherlands	
2007	Netherlands	
2009	Germany	
2011	Spain	