

Measuring player development outputs in European football (2005-06 to 2015-16)

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**Measuring player development outputs in European football
(2005-06 to 2015-16)**

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1 INTRODUCTION

2 Since the Bosman ruling in 1994, research has been undertaken around the various
3 pieces of legislation designed to influence player development and recruitment (for
4 example, Bullough and Mills, 2014; Radoman, 2015; Marcén, 2016). Other studies
5 have developed the narrative around player migration patterns and national origin
6 (Bond et al, 2016; Vaeyens et al, 2005), and demonstrated that the global nature of
7 European football has increased substantially (Poli et al 2016; Richardson et al, 2012;
8 Bullough et al, 2016). This is alongside the increasing role of global networks of
9 agents, owners and others with a vested interest in elite football (Bond et al., 2016;
10 Rossi et al, 2016).

11
12 Since the Bosman ruling, additional legislation has been introduced in the game which
13 has sought to change the landscape of the way clubs operate. The Union of European
14 Football Association (UEFA) home-grown quotas (influencing player development
15 and player migration) were put in place from 2006-07 (UEFA, 2005) and Financial
16 Fair Play rules were introduced in 2010 (Dermitt-Richard et al, 2017). UEFAs home-
17 grown regulation was endorsed by the European Parliament (Freeburn, 2009), with an
18 aim to influence clubs' approach to youth development and opportunity across the
19 European leagues. The rule places quotas on clubs to include a proportion of 'locally
20 trained players' in their squad, although nationality is not the determining factor of
21 'locally trained'. The rule is based on the nationality of the club through which players
22 have developed between the age of 15 and 21 (UEFA, 2005). Eight home grown
23 players must be included in a squad of 25, with at least four 'club-trained' and four
24 'association-trained' (Dalziel et al, 2013).

25

1 Clubs' approach to meeting quota regulations is a key indicator of the efficacy of the
2 rule, and research in this area is developing. With this in mind, this paper has three
3 aims; (1) to examine the player production data from leagues and individual clubs
4 across six European leagues in ten seasons (i.e. between 2006-07 and 2015-16) since
5 UEFAs legislation began. The extent to which organisational structure influences
6 player development is also an important element of the supply line (Relvas et al, 2010).
7 Therefore the second aim (2) is to investigate the role that league structure plays in
8 terms of player development 'outputs'. This is achieved by analysing the data of
9 national associations' depending on whether they accept or prohibit second teams in
10 their professional pyramid, as this differs by nation. The final aim of the paper (3) is to
11 discuss the design of UEFAs legislation in terms of programme theory; examining
12 UEFAs expected outcomes against what has happened. Whether the activities
13 observed would have taken place without UEFAs intervention is also discussed.

14
15 The study replicates the methodology, timeframe and categories applied in a study
16 focussing solely on England (Bullough and Jordan, 2017) and includes those players
17 making their debut since 2005-06. The sample includes the 'big 5' leagues of England,
18 France, Germany, Italy, Spain (Littlewood et al, 2011). The Netherlands are included
19 to make a six league comparison as it has been a prominent producer of young players
20 (Bullough et al, 2016).

21 22 **LITERATURE REVIEW**

23 Elite European football attracts global interest and investment, and the volume of
24 playing opportunities for young indigenous players is an issue at the forefront of the
25 ruling bodies' priorities. The legislative regulations introduced by UEFA around

1 playing opportunities, particularly in the last twenty years, have resulted in an
2 enhanced focus on player opportunity. The legislation demonstrates this is a priority
3 area of their mandate to govern the European game. However, exercising power in
4 complex structures is notoriously difficult (Houlihan and Green, 2009). It has been
5 cited that transfers have becoming more frequent and more complicated than at any
6 time in history (Menke, 2014), and the recruitment of youth players from across the
7 world has also increased significantly (Bond et al, 2016; Littlewood et al., 2011). The
8 competitive nature of European leagues has also been shown to differ significantly
9 (Ramchandani, 2012) with the 'big 5' leagues found to be the most competitive (France
10 1st, England 2nd, Spain 3rd, Italy 4th, Germany 6th) and this intensity of competition can
11 have ramifications for recruitment and development strategies within clubs.

12
13 The Football Observatory (Poli et al, 2015) outlined a snapshot of playing data for
14 July to October 2015 and found Spain was the only league of the main five in Europe
15 where the percentage of club-trained players was over 20% at the start of the 2015-16
16 season. Clubs from these five leagues were also less likely to play their own club
17 trained players; only three clubs had players playing more than 50% of the minutes
18 available. This analysis by the Football Observatory provides an insight into the issue
19 of player opportunity at the elite level of European football. This, however, is achieved
20 using a cross-sectional rather than a longitudinal perspective, which demonstrates a
21 snapshot rather than developing a greater depth of understanding.

22
23 Bullough and Jordan (2017) examined the quantity of English player outputs through
24 the academy system in the ten seasons since UEFAs intervention in 2006. They looked
25 at the clubs which produced players, where the players played, and how much they

1 played. The results outlined that the more established clubs (i.e. those ever-present in
2 the Premier League since 2006) had a modest output (141 of the 369 players produced)
3 and those players were likely to leave these clubs and play at lower achieving clubs (in
4 terms of league position). This study outlined a level of understanding around the
5 player development structure in England, however in order to provide greater
6 understanding around UEFAs rule, a wider scope is required to include the other main
7 European leagues.

8
9 Previous authors have identified that Spain, Netherlands, Germany and France have
10 recorded a greater level of appearances and minutes played for their indigenous
11 players, with England and Italy falling behind (Bullough et al, 2016). In addition,
12 England has been a prominent destination for migrating players both established, via
13 transfers, and through the youth academy system, (Bond et al, 2017; Poli et al, 2016).
14 Studies have also identified some of the developmental consequences of the Bosman
15 ruling in different European countries. For example Littlewood et al. (2011) outlined
16 an increase in non-indigenous players from 2005-2009 in the 'big 5' leagues; a decline
17 in the number of Spanish players was cited by Marcén (2016); a long-term decline in
18 indigenous playing opportunities was cited in England (Bullough and Mills, 2014);
19 and a high proportion of non-indigenous players in Italy (CEIS, 2015; Della Torre,
20 2017).

21 22 *League Structure*

23 European football is structured in a similar way at the elite level, in that most clubs
24 compete in similar sized leagues ($n=18-20$), with promotion and relegation present,
25 and an allocation of qualification entries for European club competitions (Champions

1 League and Europa League). This means comparing leagues, and clubs within those
2 leagues, is possible as they are similar in their composition, structure and access to
3 European competition. Despite this, there are differences across the major leagues with
4 regard to the organisational structure and composition of tiered leagues underneath the
5 top division, depending on the rules of that national association. The main difference
6 between associations is the allowances made (or prohibition of) elite clubs' reserve
7 teams (also referred to as 'amateur', 'B', 'II' teams) to play within the same structure as
8 the first team. Within the six major European leagues, four allow it (Spain, Germany,
9 France and Holland); four Spanish clubs also have a third team. Clubs are subject to
10 limits regarding the highest tier of the league pyramid their second team can compete
11 at; Spain (third tier); Netherlands (second tier); France (fourth tier); Germany (third
12 tier).

13
14 England and Italy do not permit teams to have second teams competing in their league
15 structure. England has 92 league clubs in four tiers, and some additional professional
16 clubs in tier five. For second/reserve teams, England has a Premier League 2
17 competition for under 23s outside of the league pyramid, **although as part of an FA**
18 **initiative, Premier League teams are permitted to enter under 23 teams in the lower-**
19 **league 'Check-a-Trade' Trophy.** Italy has the Campionato Nazionale Primavera which
20 is a youth competition comprising teams from Serie A and Serie B, for players aged 15
21 to under 19. Up to four "non-quota" players, limited to one with no age limit, are
22 permitted. Alongside the overall analysis by country and by club, the above dichotomy
23 between league structures forms part of the results section.

24
25 *Philosophy and culture; influencing player development and recruitment*

1
2
3 1 Previous studies have demonstrated different attitudes towards organisational culture
4
5 2 between nationalities or clusters of nationalities. Giulianotti and Robertson (2009)
6
7 3 outlined that football is a blend of intricate and overlapping influences from history,
8
9 4 culture, politics, economics and society. The influence of nationality on organisational
10
11 5 values/value systems was cited by Hofstede (1980) and developed further to place
12
13 6 culture and values as important influences on behaviour. The relevance of cultural
14
15 7 environment as an influencer on attitudes and behaviour was discussed by Ronen and
16
17 8 Shenkar (1985) and this included clusters of nations based on variables such as the
18
19 9 values, attitudes and goals of society. In this study, five of the nations included in the
20
21 10 sample were cited but placed in three different clusters; Germany (Germanic cluster),
22
23 11 England (UK) (Anglo cluster) and Spain, Italy, France (Latin European). Such studies
24
25 12 outline clear differences between clusters in terms of culture and behaviour within
26
27 13 organisations, and this cultural outlook may influence how individual clubs within
28
29 14 these countries approach player development. Coyle (2018) proposed that culture in
30
31 15 organisations is fashioned through everyday life, and the decisions taken reveal its
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33 16 identity and bias, which continually test the preferences of its leaders against reality.
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42 18 Webb & Thelwell (2015) note commonly held beliefs around the different styles of
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44 19 play identified between different leagues, for example more physical and faster in
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46 20 England, a more technical approach based on skill and flair in Spain and a slower
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48 21 tactical construction of play in Italy. Such approaches may resonate with styles of
49
50 22 play, links to national, regional or individual club culture, and changes in ownership.
51
52 23 All are notable examples of different cultures and behaviours exhibited in clubs, in
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54 24 leagues and by individuals. There are some notable examples which outline some of
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56 25 the contrasting approaches clubs adopt towards player development and recruitment.
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6 2 The influence of cultural identity on player behaviour is also important. Studies have
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8 3 shown that certain behaviours and specific traits can be attributable to players from
9
10 4 certain countries (Webb & Thelwell, 2015), and this may include gamesmanship
11
12 5 (Triviño, 2012; Berman, 2011) simulation (Renden et al., 2014) or introducing
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14 6 deception in a penalty kick (Dicks et al., 2010).
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8 Examples show how the culture and approach to club operations differs between, and
9 within, nations. Culture within some clubs is rooted in history, with some leading
10 European clubs established at the end of the 19th Century, for example Manchester
11 United (1878) and Barcelona (1899). Some elite clubs are much more recently
12 established, such as RB Leipzig (formed in 2009). Different clubs have demonstrated a
13 different standpoint around the inclusion of non-indigenous players in their first-team
14 across the history of the game. This issue is also not a new phenomenon, as the
15 formation of Internazionale Milan in 1908 shows (Facchetti and Zanetti, 2018). A
16 disagreement between the owners of the Milan Cricket and Football Club (now A.C.
17 Milan) around fielding players from overseas culminated in a split and the creation of
18 a new club (Internazionale Milano). The new club name was derived from the
19 founding members' willingness to include foreign players, demonstrating conflicting
20 approaches in this area over 100 years ago.

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22 One notable club in this regard is Athletic Club Bilbao, owned by its members with a
23 (non-written) policy requiring players to be native to the Basque country; where
24 profits are re-invested into the academy system (cantera) underpinned by a philosophy
25 of 'con cantera y afición, no hace falta importación' meaning 'with home grown talent

1 and local support, you do not need imports' (Vaczi, 2015). The focus and resources are
2 placed into sourcing and developing local talent rather than importing them. Athletic
3 Club have a direct supply line into their first team through two routes; fourth tier
4 feeder club CD Basconia and second/third tier Athletic Bilbao B, which are all part of
5 the club structure. The strategy is for players to develop through the feeder teams
6 before making the transition to the first team, which underpins their cultural identity.

7
8 FC Barcelona has the prominent 'La Masia' academy which has seen a stream of
9 players graduate into the first team (Hunter, 2012). The identity created by Barcelona
10 at organisational level (a collective sense of being, and knowing what the clubs stand
11 for) is a shared concept across the playing staff, management, and club employees,
12 known as 'més que un club' / more than a club (Harvard Business Review, 2015). Ajax
13 Amsterdam are another notable club (producing esteemed players, van Basten,
14 Bergkamp, Davids, Kluivert, Sneijder), but with a differing approach to retention. The
15 majority of players are sold at a relatively young age for significant transfer fees,
16 which is re-invested in the academy.

17
18 A divergent approach to youth development is Chelsea in England, particularly their
19 use of the loan system. In 2016-17 the club had 36 registered players out on loan in
20 addition to their first-team squad (Guardian, 2016; Independent, 2017). Chelsea have
21 also recorded high value player sales for players that have played little for the club or
22 been developed elsewhere. Two notable examples include Romelu Lukaku (purchased
23 for £10m, 10 Premier League appearances for Chelsea in four years, two loans, sold
24 for £28m); and Thibaut Courtois, purchased then loaned straight to Atletico Madrid
25 for three seasons to develop, making 111 league appearances before returning to

1 Chelsea's first team in 2014. This organisational approach is in stark contrast to the
2 philosophy at some other clubs, but has either generated significant commercial
3 returns for players not breaking through for Chelsea or allowed other clubs to develop
4 their players ready for Chelsea's first team. These examples demonstrate the more
5 extreme (and contrasting) operating approaches to player recruitment and development
6 which influences the success of UEFAs legislation around protecting opportunities for
7 young players in Europe.

8

9 *Home-grown legislation - consideration of programme theory?*

10 UEFA designed the home-grown rule as a response to changing migration patterns and
11 a concern over the ability to protect opportunities for locally trained players (UEFA,
12 2005). However, the structure (and power) in football between governing bodies and
13 clubs is complex. The relationship between UEFA and the clubs has been described as
14 a 'principal-agent relationship' (Schubert, 2014) with UEFA needing the clubs to
15 compete in their competitions. Therefore clubs are required to adhere to UEFAs
16 legislative interventions (e.g. FFP, home-grown quotas).

17

18 Use of programme theory in sport has focussed on major events or participation
19 interventions, rather than multi-national, multi-agency regulatory intervention such as
20 UEFAs home-grown rule. The home-grown regulation is not a legacy programme like
21 an Olympic Games as such. To achieve the desired impact (i.e. greater protection
22 leading to improved opportunities for young indigenous players) a major operational
23 and cultural shift across Europe is required. Clubs have traditionally had youth
24 academies and developed players, and this process would happen regardless of UEFAs
25 intervention. It can be questioned whether any additionality in the system stems from

1 investment (of time and effort) as a result of the legislation, or something that would
2 have taken place anyway (Weed, 2014, p. 112)? Attributing additionality from the
3 regulations is difficult without a theory of change which explicitly develops clear
4 expected outcomes that can be traced.

5
6 Programme theory identifies the outcomes pursued, the processes required to achieve
7 them and an assessment of whether the outcomes achieved were generated by the
8 assumed processes (Rogers, 2008). The UEFA **legislation had two clear aims**. First
9 was to improve the training of young players and their level of opportunity, and
10 second, was to see an improvement in the competitive balance in Europe (Dalziel et al.
11 2013). The rule would also allow 'markets' to maintain a geographic character
12 (Miettinen and Parrish, 2007). Criticism of previous UEFA interventions, for example
13 Morrow (2013) on FFP and Bullough et al (2016) for home-grown legislation,
14 demonstrates how it is possible for clubs to circumvent UEFAs regulations (i.e. the
15 assumed process). This may point to an issue in their design, in particular around the
16 principles of programme theory and understanding how inputs, activities and outputs
17 lead to expected outcomes. A theory of change should outline how programme inputs
18 (e.g., finances and support) will be allocated or used to generate the desired outputs
19 and outcomes (Weed, 2014). Coalter (2011) also suggested this should be a framework
20 for analysis rather than a method of delivery.

21
22 Previous work around the use of programme theory in sport (Coalter, 2007, 2011;
23 Weed, 2014), noted three main concerns. First, there tends to be a focus on outputs not
24 process and outcomes, second, the use of cross-sectional rather than time series data,
25 third, a failure to factor and control dominant variables that are wide in range and

1 sometimes conflicting. It could be argued retrospectively that the construction and
2 imposition of UEFAs regulations appears to have a limited theory of change
3 underpinning it. The rationale could also be criticised for (1) focussing on outputs not
4 the process and (2) not controlling dominant variables.

5
6 The control of dominant variables is a clear weakness in the design of the home-grown
7 rule as the majority are not under UEFAs direct control. The UEFA quota rules are
8 imposed across the continent, although the inputs (and thus the influencing factors)
9 vary significantly between countries. Inputs, in a football context, include those at
10 both individual club level and national association/league level. For clubs, influences
11 on inputs can emanate through youth development philosophy and the approach to
12 player development, player trading strategy, ownership model and financial budget for
13 transfers and financial budget for the academy. At national association/league level,
14 influences include third party finance deals e.g. TV rights/sponsorship, European
15 competition allocation, league structure, coaching infrastructure and coaching volume.
16 This creates a complex environment and reduces the ability of key stakeholders to
17 control dominant variables, as outlined above. Issues can also arise when policy
18 makers become more concerned with demonstrating what the outcomes are ahead of
19 delivering them, particularly if interventions are the product of political decisions
20 requiring justification (Weiss, 1993; Weed 2014). In the case of the home-grown
21 legislation, the policy was designed due to a desire within UEFA to protect indigenous
22 players (Dalziel et al, 2013).

23
24 A significant amount of additional revenues have come into the game through UEFA
25 competitions and through commercial activity such as sponsorship and enhanced

1 media deals. However, an additional complication is that inputs in European football
2 are not homogenous between leagues or between clubs in the same league. For
3 example, between leagues, England have a more equal financial distribution model
4 than Spain and Italy (Wilson et al, 2018); however the Premier League's bottom clubs
5 receive more media revenue than the top clubs in other leagues, apart from Barcelona
6 and Real Madrid in Spain who have historically received a higher allocation than the
7 other La Liga clubs (Storm and Solberg, 2018). Many of the inputs influencing player
8 development and recruitment are not, therefore, controlled by UEFA or directly under
9 their jurisdiction. As the level of financial input is not standardised in terms of equal
10 distribution (Wilson et al, 2018) or, importantly, not allocated specifically to the
11 activities related to indigenous youth development. Clubs are free to formulate and
12 execute their own strategy for resource allocation for recruitment, development etc.
13 UEFAs ability to influence the necessary actions required to achieve the desire to
14 increase opportunities, as set out in the rationale for the regulation, therefore, is weak.

15
16 It is an assumption to suggest that programme theory was not considered in UEFAs
17 design of their home-grown regulations. Programme theory can be used
18 retrospectively to illustrate the expected outcomes i.e. what was meant to happen
19 (Figure 1) with what has actually happened (see results section). This is in-line with
20 Coalter's (2011) suggestion that programme theory should be a framework for analysis
21 rather than a method of delivery.

22
23 **Figure 1 'Assumed' Home grown rule logic model (UEFA) - here**

24
25 **METHOD**

1 This research had three main aims. First, examine the player production data from
2 leagues and individual clubs in six European leagues (2006-07 to 2015-16). Second,
3 analyse player development 'outputs' in relation to league structure (second teams).
4 Third, discuss the design of UEFAs legislation in terms of programme theory;
5 examining UEFAs expected outcomes against what has occurred.

6
7 The categorisation of clubs was chosen to follow the methodology and sample
8 timeframe from Bullough and Jordan (2017) to allow a comparison across the six
9 leagues. Clubs were categorised into four groups depending on their top-flight record
10 in the ten year period, (1) ever-present, (2) majority (6-9) of seasons, (3) minority (2-5)
11 of seasons, and (4) one season. A fifth group was not included in this study, but is
12 worthy of note as part of the supply chain. It accounts for all other clubs with no
13 seasons in the top league, but may still have a presence in terms of developing players
14 which progress into the top leagues. The sample time frame was the first ten seasons
15 of competition from the introduction of the home-grown regulations (2006-07 to 2015-
16 16).

17
18 Previous studies in this area have outlined the different measurement techniques
19 applied to assess playing opportunity, including starting eleven, squad composition,
20 appearances made and minutes played (Gratton and Solberg, 2007; McGovern, 2002;
21 Bullough and Mills 2014; Bullough et. al., 2016). In order to ensure the most accurate
22 measurement of quantity and quality, the most recent studies have developed to
23 analyse the volume of activity (namely minutes) as the most accurate descriptor of
24 opportunity levels. This allows volume to be aggregated to demonstrate opportunity
25 levels in a more comprehensive way than using the composition of teams/squads and

1 appearances. If players attended two different clubs' in their formative years (under
2 18), both clubs are credited with a role in that players' development.

3 4 *Sample*

5 The overall number of eligible teams in the sample (n = 200) from the six leagues can
6 be split by nationality (Table 1) with England (37) having the most teams appearing in
7 their top flight followed by France (36), Spain (35), Italy (34), Germany (33), and
8 Holland (25). Germany and Holland have 18 team leagues; the other four nations have
9 20 teams per season. Italy has the lowest proportion of ever-present teams in this
10 sample but has eight clubs with nine seasons in Serie A, three of which (Juventus,
11 Napoli, and Genoa) were all promoted in 2006-07 and were then ever-present to 2016.

12 The variables collected for each player were: playing data (minutes and appearances),
13 season(s) played, nationality, academy attended, team played for, and league played in.

14
15 The competitive nature of ten European leagues (including Portugal, Russia, Scotland
16 and Switzerland) was assessed by Ramchandani (2012) with the French Ligue 1 the
17 most competitive and the Eredivisie (Netherlands) the least (10th). The Eredivisie has
18 the lowest diversity of clubs (25) and the lowest 'turnover' of clubs, with 10 being
19 ever-present (matched only in France), and only two clubs playing one season (the
20 other leagues average eight single season clubs). Despite this, Netherlands is included
21 as they have been shown to be a prominent producer of young players, as outlined
22 earlier.

23
24 **Table 1 Sample of clubs - here**

25

1 The number of eligible teams in the sample with a second team competing in the
2 professional system varies between nations with England (0 out of 37) and Italy (0/34)
3 not allowing this in their structure. The majority of clubs in the sample from Spain
4 (33/35) and Germany (18/33) have this structure, with France (13/36) and Holland
5 (9/25) having a minority of clubs with a second team. Overall 73 of the 200 clubs in
6 the sample have a second team in the professional structure. This difference was
7 investigated and forms part of the results section.

8

9 *Data Analysis*

10 To meet the three aims of the paper (to quantify outputs and investigate league
11 structure in order to inform the discussion on the design of the legislation), playing
12 data from each team in each season was collated and coded using SPSS. The following
13 variables were collated; name, age, nationality, club played for, league played in,
14 academy/academies attended, appearances, minutes played, and international caps
15 (senior and age-group). This data was then categorised subject to key areas of interest
16 (i.e. academy attended, team played for). To meet the aims of the paper, the
17 descriptive statistics function allowed the calculation of whole system outputs (by
18 national association). Subsequently, splitting the file into sub-groups (clubs, season,
19 academy attended) enabled the volume of cumulative playing data, number of players
20 etc. to be quantified. Playing data was then cross-checked to examine whether the
21 academy attended and the club played for matched, in order to determine the rate of
22 transition from academy to first-team in the same club. This methodology recognises
23 where clubs give indigenous youth opportunities overall, although only aggregates
24 data for eligible players i.e. those debuting since 2005-06. However, the data is a
25 robust and accurate quantification of the elite European football pathway, accounting

1 for 3,329 players, making 139,273 appearances, and generating 9,390,136 minutes of
2 play.

4 RESULTS

5 The results section is structured into three areas, first in relation to the whole system,
6 second individual clubs and club types (see Table 1), and third, league structure. For
7 individual clubs, the analysis measured the overall production figures and academy
8 players making the transition into their first team.

10 *Whole system*

11 Four of the six leagues comprise 20 teams (France, Germany, Italy and Spain with 200
12 elite league spaces across 10 years) and two comprise 18 teams (Germany and Holland
13 with 180 league spaces).

15 For this sample i.e. the emergence of player's since the home-grown rule was imposed,
16 the headline number of top-flight players produced in each system 2006-2016 include
17 Spain (710), France (647), Holland (563), Italy (521), Germany (519), and England
18 (369). The level of production varies considerably between countries with Spain (the
19 highest) producing almost twice the amount of players than England (the lowest). The
20 two 18-team leagues (Holland, 563, and Germany, 519) produced a similar amount of
21 top-flight players; the greater range emanated from the 20-team leagues (+/-341).

23 On average, 339 indigenous players debut each season in one of the six main leagues
24 (an average of 57 per league), although the top (Spain) average 71 new players and the
25 bottom (England) register 37, with France (65), Holland (63), Germany (52) and Italy

1 (52). An average of 325 players debuted in each of the first three years post-legislation
2 (2005-08), and 370 in the last three years in the sample (2013-16). Against the
3 expected outcome (Figure 1) that "legislation leads to a greater number of indigenous
4 players recruited and retained by elite clubs", the outputs show a minor improvement.
5 This marginal increase does not represent widespread culture change, more a case that
6 France and Holland have seen some increases. Spain (71 new players per season on
7 average) and Germany (51) have both remained consistent over the ten year sample.
8 England have seen a small increase in the last three years compared to the first three
9 (34 to 43) but are still lower than the other five nations; Italy have seen a decline in
10 terms of the average number of debuting players (63 to 54).

12 *Individual clubs*

13 The outputs by individual clubs outlines that four of the top six clubs producing top-
14 flight players reside in Spain, seven of the top 20 clubs play in the Dutch league, three
15 French. In terms of playing opportunities for indigenous players since 2006 (regardless
16 of their year of debut and academy development background) 18 clubs have facilitated
17 over 200,000 minutes of playing time for indigenous players although there are
18 notable exceptions. Athletic Bilbao has overseen 347,193 minutes by Spanish players,
19 almost 85,000 minutes more than the next highest club (Feyenoord, 262,751). Only
20 one German team (Bayer Leverkusen) are in the top 20 overall, and the highest
21 English team (Aston Villa) are 37th (out of 200). One club (Arsenal) have recorded
22 more minutes by French players (96,687) and Spanish players (52,102) than English
23 players (40,154) from 2006-16. This includes all playing opportunities, not just those
24 players making their debut since 2006.

25

1 The highest ranked clubs from Germany (#13), Italy (#15) and England (#18) are all
2 outside the top 10; and England only has three clubs in the top 50. Interestingly, the
3 two most successful Spanish clubs (Barcelona and Real Madrid) have a strong record
4 of development in terms of players produced (68 and 58 respectively) and also
5 representing that club (21 and 24). This volume of development is not necessarily
6 replicated by the most successful clubs in the other leagues outside of Holland. Ajax
7 (99) and Feyenoord (71) are the leading European clubs for player production in the
8 sample timeframe. Table 2 outlines the leading clubs for players produced and minutes
9 played (overall), and also for the clubs providing the most opportunity for their own
10 academy graduates.

11
12 **Table 2 Total produced - Overall and Same club (Category 1, unless stated) -**
13 **here**

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15 Four clubs stand out in the sample in terms of producing players; Ajax (99),
16 Feyenoord (71), Barcelona (68), Real Madrid (58). Feyenoord (36), Utrecht (36), and
17 Athletic Bilbao (32) saw the most indigenous academy players transition into their
18 first-team. Feyenoord and Athletic Bilbao are the only two clubs to appear at the top of
19 both lists for providing 'same club' opportunities. The Bilbao data can be identified as
20 a direct result of their policy to only select players with Basque heritage, developed
21 through their own club structure. At the opposite end of the production level, four
22 category 1 clubs have produced ten or fewer players transitioning into one of the top 6
23 European leagues between 2006-2016; one Dutch (Heracles Almelo, 4 players), two
24 English (Manchester City, 6; and Chelsea, 10) and one Italian (Udinese, 6). This
25 demonstrates the varying approaches to player development and the provision of
26 playing opportunities between clubs in Europe.

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Overall, 19 clubs have produced five or more players since 2006 which have played at senior international level with Ajax (14) Feyenoord (13) and Barcelona (10) the only three clubs to reach double figures: 9 (Real Madrid) 7 (Bayern Munich, Schalke, Stuttgart) 6 (Atlético Madrid, Lyon, Manchester United, Valencia) 5 (AC Milan, Borussia Dortmund, Liverpool, PSV Eindhoven, Tottenham Hotspur, Juventus, Southampton, Sparta Rotterdam). One interesting example is Schalke 04, the club with the highest number of caps from academy graduates up to Euro 2016 (236 caps), with notable players such as Özil, Neuer, Höwedes, Draxler, Gündogan and Sané passing through the Schalke academy system during their developmental years.

11

12 *Category 1 - Ever-present clubs*

13 Category 1 is an important group as this is (generally) where the league winners and Champions League qualifiers reside (Italy apart, with Juventus in category 2), meaning players are playing in title chasing clubs and in the premier European competition. The 51 clubs in category 1 (i.e. ever-present) make up 25% of the sample, but account for over half (51%) of both the appearances made (70,903/139,273) and minutes played (4,757,264/9,390,136) between 2006 and 2016. However, these outputs differ by national association and by club in terms of both volume and averages. Dutch and Spanish category 1 clubs have played a role in developing a higher number of players (411 and 336) and average (41 for Dutch; 42 Spanish) per club. Compared to the other four nations, this is much higher than France (averaging 25 players per club), Germany (22), Italy (21) and England (18). In terms of the average number of players playing for the club in which they developed, for the

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3 1 Category 1 clubs Netherlands (23) and Spain (20) have the highest followed by France
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5 2 (18), Germany (13), England and Italy (both 11).
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10 4 **Table 3 Minutes played and averages by club category - here**
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15 6 For the volume of minutes played in the six leagues (Table 3), Dutch (1,482,339) and
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17 7 Spanish (1,008,967) players developing through category 1 clubs played a greater
18
19 8 number of minutes than France (843,391) and Germany (752,289). This volume
20
21 9 significantly decreases for England (373,873) and Italy (296,405). As each category
22
23 10 has a different number of clubs, the averages provide additional context, and
24
25 11 demonstrate that the eight ever-present Spanish clubs and the ten ever-present Dutch
26
27 12 clubs have the greatest outputs per club. Dutch clubs in Category 1 average 148,234
28
29 13 minutes of activity for players they produced and an average of 50,485 minutes played
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31 14 at the club in which they developed, followed by an average of 126,121 minutes in
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33 15 Spain (averaging 36,931 minutes in their 'parent' club). The figures at the opposite end
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35 16 of the scale in Category 1 further demonstrate the disparity in England and Italy.
36
37 17 English (total 46,734; average 11,808) and Italian (total 49,401; average 8,919)
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39 18 Category 1 clubs are behind the other nations in terms of player development
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41 19 opportunities. Italy have a higher volume in category 2 (the only nation where this
42
43 20 occurs) due to three of their stronger clubs in the last ten years (Juventus, Genoa and
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45 21 Napoli) being in this category.
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55 23 *'Leakage'*
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24 The database outlines the presence of 'leakage' in the youth development system i.e.
25 players going to other top flight clubs' academies which are outside of their national

1 association to develop, as discussed in the literature (Littlewood et al, 2011; Poli et al
2 2016; Bond, 2016; Richardson et al, 2012). Although this occurrence can be beneficial
3 to players and clubs, certain countries have been shown to be more popular
4 destinations and this additional line of supply can have an impact on the opportunities
5 available, with the home-grown rules being 'regardless of nationality'. The database
6 shows that 79 players in the sample have developed, at some stage, through the youth
7 system of a club in one of the six leagues outside their own national association,
8 although the contrast between nations is stark. Overall, 51 of the 79 players 'leaking'
9 from their system moved their development to England, predominantly through
10 category 1 clubs (40/51). With globalised ownership models prominent in England,
11 this somewhat reflects part of the culture in English clubs, where the best players, not
12 necessarily the best indigenous players, populate some academy teams. The financial
13 rewards on offer in England are also significant (Plumley et al, 2018) and often higher
14 than other leagues, which can be an influencing factor for players/agents.

15
16 Stockpiling of talented young players (for example, those with junior international
17 experience) also occurs at some clubs, with limited first-team opportunities on offer.
18 There are high profile clubs in the sample where their academy graduates have
19 generated a high number of international caps at junior level (up to Euro 2016) but had
20 not generated many first team minutes in the top-flight relative to the volume of junior
21 international experience. For example, Inter Milan, are credited with 29 academy
22 players but these 29 have a modest level of experience at senior international level (2
23 players, each with 21 caps up to Euro 2016); however at junior level, the same players
24 recorded 541 under 16-20 appearances and 201 appearances for the under 21s.
25 Chelsea's academy graduates had the highest number of under 21 caps for any English

1 club (95) but had only recorded 21,919 minutes of top-flight football, 1,085 of which
2 for Chelsea. There is a danger that junior internationals are registered to some clubs
3 where their first-team opportunities will be limited, if the culture and philosophy is
4 weaker towards providing opportunities for players coming through the academy
5 system.

6 7 *League Structure*

8 As discussed earlier, the presence of second teams in the league structure is not
9 permitted in all leagues, and the player production data can isolate those clubs that
10 have a second team ($n = 73$) and those that do not ($n = 127$). Those clubs with a
11 second team in the sample have a greater average number of seasons in the top league
12 (7) compared to those without (5). They have also produced a higher average number
13 of players through their club (21 per club) compared to 12 for clubs with no second
14 team. This difference is also present for the players emerging to play for the same club
15 in the first team (an average of 12 players compared to 7). Players playing at the club
16 they developed at also generate a greater volume of appearances and playing time,
17 averaging 51 top-flight appearances each compared to 41 for other clubs, and 3,421
18 minutes each (versus 2,737).

19
20 For those clubs with a second team, there appears to be strength in this structure (i.e.
21 develop players in the same environment to make the transition easier), see Table 4. A
22 similar proportion of players transitioned into their parent clubs' first team at some
23 point in their career for clubs with a second team (59%) and clubs without a second
24 team (62%). There are, however, differences in volume for 'same club transition'. In
25 total, 26,710 'same club' appearances were made at those clubs with a second team

1 compared to 20,335 for those without, generating 1,750,724 versus 1,342,495 minutes
2 played respectively. This means that, with 53 fewer clubs, the sample of those with a
3 second team produce a similar number of players, but generate a greater volume of
4 overall playing time and developmental outputs via more a prominent level of
5 transition into the first team.

6
7 The advantages of having a second team include involvement in the club
8 environment/philosophy, access to similar facilities/coaches, potential for smoother
9 transition, familiarity, support, not having to move etc. Although the removal of
10 transfer fees applies to youth teams as well as second teams, critically youth teams do
11 not play in the professional structure in the way B teams do. Culturally, this structure
12 is not followed in England and Italy with a much wider breadth of professional clubs
13 and there are no plans to change this structure.

14 15 **Table 4 Outputs by 'second team in league' allowance - here**

16 17 **DISCUSSION**

18 The purpose of the research was to examine European player development, with a
19 focus on individual clubs and national associations, league structure and an application
20 of programme theory. By widening the scope of nations, the results examine the
21 impact of the legislation within clubs across six European leagues (Spain, Germany,
22 France, Italy, Netherlands and England) over ten seasons between 2006-07 and 2015-
23 16. This aims to identify the most prominent player development pathways in the main
24 European leagues with regard to the clubs, type of clubs and the potential role of
25 league structure.

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5 2 The role of UEFA and individual national associations in the process of facilitating
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7 3 indigenous opportunities is reliant on the philosophy and actions of individual
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9 4 clubs/within leagues. The outputs generated outline that the 'direction of travel' over
10
11 5 ten seasons is effectively a plateau in terms of volume. This has (as yet) not resulted in
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13 6 UEFA making amendments to the quota rules or tightening regulation (for example,
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15 7 ensuring nationality is a factor in the quota, rewarding clubs with high indigenous
16
17 8 outputs). The outputs generated need to be rationalised around the process in which
18
19 9 they operate, i.e. where UEFA as the governing body has a weak level of power to
20
21 10 influence different behaviour by clubs to achieve the anticipated outcomes. The
22
23 11 influence of nationality on organisational values and behaviours is an important factor
24
25 12 (Hofstede, 1980), and 'clusters' of nationalities demonstrate differences in values,
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27 13 attitudes and goals (Ronen and Shenkar, 1985). Legislation, in the form UEFA
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29 14 introduced, does not account for differences between nations in terms of culture and
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31 15 behaviour within organisations around player recruitment and development.
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40 17 The anticipated outcome of a greater number of young indigenous players being given
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42 18 opportunities has only seen a marginal positive benefit, with an average of 325 players
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44 19 debuting per season in the first three years post-legislation, and 370 in the last three
45
46 20 years in the sample. The outputs suggest that there has not been a systematic culture
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48 21 change amongst clubs; therefore the anticipated outcome has not been achieved.
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50 22 UEFAs expected outcome of greater opportunity is yet to materialise on a macro level,
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52 23 although there is evidence of some protection of opportunity as there has not been a
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54 24 decline.
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3 1 For a young player, it could be argued that the main supply 'should' be through your
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5 2 parent club, however in the modern game this is far from the case, with youth transfers
6
7 3 and the role of agents for academy players becoming more prevalent. With scouting
8
9 4 networks evolving and widening (Poli et al, 2016; Bond et al, 2016), making the grade
10
11 5 as a professional has arguably never been more competitive. If opportunities for 'local'
12
13 6 players are deemed worthy of protecting in the future, stronger regulation may be
14
15 7 required to underpin any legislative developments. Some clubs/national associations
16
17 8 stand out from the sample in terms of outputs, and there appears to be correlations
18
19 9 between league outputs and league structures (i.e. second teams in the professional
20
21 10 structure), although this is not suggested to be direct causation. The national
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23 11 association with the highest outputs (and also the greatest level of international success
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25 12 in the last decade) is Spain, where 33/35 clubs in the sample have a second team in the
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27 13 league structure.
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35 15 For individual clubs, Athletic Bilbao is an outlier in terms of their approach, where
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37 16 over one hundred years of history is in place driving a philosophy of playing only
38
39 17 those with Basque heritage. A club owned by its members embodies the local cultural
40
41 18 identity under the idea that 'with home grown talent and local support, you do not need
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43 19 imports' (Vaczi, 2015). Ajax and Feyenoord also appear to have a philosophy of
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45 20 producing their own players which is reflected in the results, although without the
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47 21 direct cultural significance of Bilbao. Ajax had (up to 2015-16) only exceeded the
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49 22 £10m barrier for an incoming transfer once in the sample timeframe; Feyenoord had
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51 23 never done so. In context, the top 100 all-time transfer fees to July 2016 are all above
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53 24 £33m.
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1 For national associations, although Spain leads the way, Germany has a more modest
2 output level but with an 18 team league (which reduces the number of fixtures) appear
3 to have a development system producing high quality. Germany has registered a
4 World Cup win, two third places and two European semi-final appearances since 2006.
5 Dutch clubs have a high volume (quantity) of players and playing opportunities, but in
6 the least competitive of the major European league (Ramchandani, 2012). The
7 Netherlands (alongside Italy and England), however, have all missed major
8 tournaments since 2006.

9

10 *Programme theory tested - expected outcomes or unintended consequences?*

11 A programme theory approach allows us to assess the efficacy and legitimacy of
12 implementing a 'strategy' and allows researchers to attribute outcomes to interventions
13 (Weed, 2014). Tracing a path from the objectives and inputs to the outputs and
14 outcomes stipulated "is an approach that is particularly appropriate when programmes
15 have complicated (multiple streams) and/or complex (dynamic) elements" (Weed, p.
16 110).

17

18 Programme theory can, therefore, be used to illustrate what was meant to happen with
19 the implementation of the regulations, with what actually happened. European football
20 (leagues, clubs, financial models, ownership etc.) is not homogenous, operating in
21 different environments with different financial resources. For UEFA to be able to
22 identify and evaluate change (expected and unexpected), there is a need for them to
23 understand how change occurs and what the causal mechanisms are. The control
24 UEFA have over the player development process is limited beyond setting the
25 legislation. As Coyle (2018) outlined, decisions taken by organisations reveal its

1 identity and bias, and test the preferences of leaders against reality. For clubs that
2 value commercial advantage and/or short-term transfers in the pursuit of trophies over
3 youth development, UEFA have limited influence on such organisational values.

4
5 Assessing the legislation against the principles outlined in Figure 1 outlines clear
6 deficiencies in the design. First, UEFAs legislation did not allocate any additional
7 'inputs' to clubs being affected by the quotas (namely financial resources) and this is a
8 key component to drive positive change and influence future behaviour. Second, the
9 process (i.e. the resource allocation and activities that create the outputs) are not
10 agreed or coordinated between clubs/leagues/national associations. Third, the
11 regulations are not strictly imposed (in that home-grown players do not have to be
12 indigenous to the country they play in, and the home-grown quota is a small minority
13 of the squad) which impacts on the outputs generated. Fourth, any change in behaviour
14 and approach is not explicit, nor consistent between clubs, and does not appear to have
15 changed significantly. Fifth, questions remain regarding the attribution of any change
16 to the regulation being introduced. Finally, the literature available, which highlights
17 increasing transfers of youth players and changing player migration patterns, may be
18 an unintended (potentially negative) consequence of the legislation.

19
20 A more rigorous underpinning theory of change (and level of influence) would be
21 required than was in place for the home-grown rule to have a greater impact, and
22 achieve the desired outcomes. For any new rule to demonstrate genuine, traceable
23 change, outlining what is expected through its implementation is important.
24 Understanding the efficacy of the legislation, and identifying any unexpected
25 outcomes should be considerations for future policy developments around protecting

1 indigenous/youth playing opportunities. Concentrating on outputs not process and not
2 being able to control dominant variables are issues for macro level interventions.
3 UEFAs ability to control the dominant variables is weak, and this is a prominent issue
4 in terms of its ability to influence the elite clubs and leagues. In addition, the cultural
5 differences between countries outlined earlier (Hofstede, 1980; Ronen and Shenkar,
6 1985) are potentially significant influences on behaviour within clubs. This is not in
7 UEFAs control, and appears to have not been a factor in the design.

8
9 The data demonstrates there has not been a major cultural or operational change in the
10 first 10 years, albeit with some protection with marginal increases in three countries,
11 and a minority of clubs with higher outputs (Table 2). The contradictions outlined
12 between the expected and actual outcomes are a demonstration of the difficulties in
13 exercising power in complex structures (Houlihan and Green, 2009). The significant
14 autonomy of clubs in Europe reduces the ability of UEFA as the governing body to set
15 a new strategic direction from a position of strength, allied with a limited level of
16 power to manage/change the behaviour within clubs.

17 18 *Limitations*

19 The methodology recognises where clubs have given indigenous youth opportunities,
20 however, not those debuting since 2005-06. It is arguably weaker when applied to
21 indigenous players that clubs have purchased, rather than developed through their
22 academy. A good example is Tottenham, generating 148,798 minutes played by
23 English players in the ten seasons, but 53,950 (36%) by players eligible to be included
24 in this sample. Tottenham's minutes have largely been generated by purchased players
25 (e.g. Ali, Trippier, Rose, Dier, Walker); only 16,639 minutes of this volume (31%)

1 was accumulated by their academy graduates, the 64th highest in the sample of 200
2 clubs and 33/51 in category 1. Whether this is this a problem, however, can be debated.
3 The club appears to have a positive approach towards playing English players
4 compared to other English clubs (ranked 4/37); yet this approach does not necessarily
5 reflect evidence of a pathway from their academy to first-team.

6
7 A second limitation relates to players changing the nationality they represent which
8 can influence outputs. Players can switch nationality at senior level from junior level
9 as the rules have been relaxed. Examples of players representing their country of birth
10 (at junior level or senior internationals in friendlies), then switching is becoming more
11 prominent. With nationality not now being a constant variable, changes can affect the
12 results when assessing the efficacy of such legislation.

13 14 **CONCLUDING COMMENTS**

15 The results highlight that there are clearly differing cultures, philosophies and
16 approaches between clubs in the main six European leagues which influences player
17 development and the provision of playing opportunities. The legislative intervention
18 by UEFA aimed to (1) improve the training of young players, (2) protect their level of
19 opportunity and (3) improve the competitive balance in Europe (Dalziel et al. 2013).
20 However, retrospective application of programme theory i.e. comparing expected and
21 actual outcomes, suggests that UEFA failed to achieve most of their intended
22 outcomes in the first ten seasons. This is largely a result of not being able to control
23 and influence the dominant variables in the complex environment in which elite
24 football operates. Implications from this research for UEFA to consider when
25 designing legislation in the future include (1) taking wider consideration of cultural

1 differences (2) understanding the dominant variables and, importantly, how they can
2 be influenced (3) introducing stronger parameters which reduce the ability of clubs to
3 circumvent their legislation.

4
5 By applying programme theory to the legislation, we address two key questions. First,
6 whether the activities observed would have taken place without the intervention in
7 question (in this case, the home-grown rule) and second, whether the activities
8 observed would have taken place in the same format without the intervention. Player
9 production and international transfers happened prior to UEFAs rule change, and the
10 outputs have recorded limited (if any) change in behaviour. The nature of player
11 development, transfers and recruitment strategies have also evolved substantially as
12 the game generates greater financial resources. Market conditions in each league vary
13 considerably and also vary between clubs in the same league, in particular the leading
14 clubs chasing trophies. UEFAs (arguably) weak design, in not making nationality a
15 factor and their inability to control other dominant variables, are both flaws in the
16 legislation, and have had little discernible influence on the behaviour of clubs. The
17 design of the home-grown rule could be described as weak in terms of its ability to
18 influence positive change in its current format, and meeting the rationale cited for its
19 introduction.

20

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Team Performance Management

1 **Figure 1 'Assumed' Home grown rule logic model (UEFA)**
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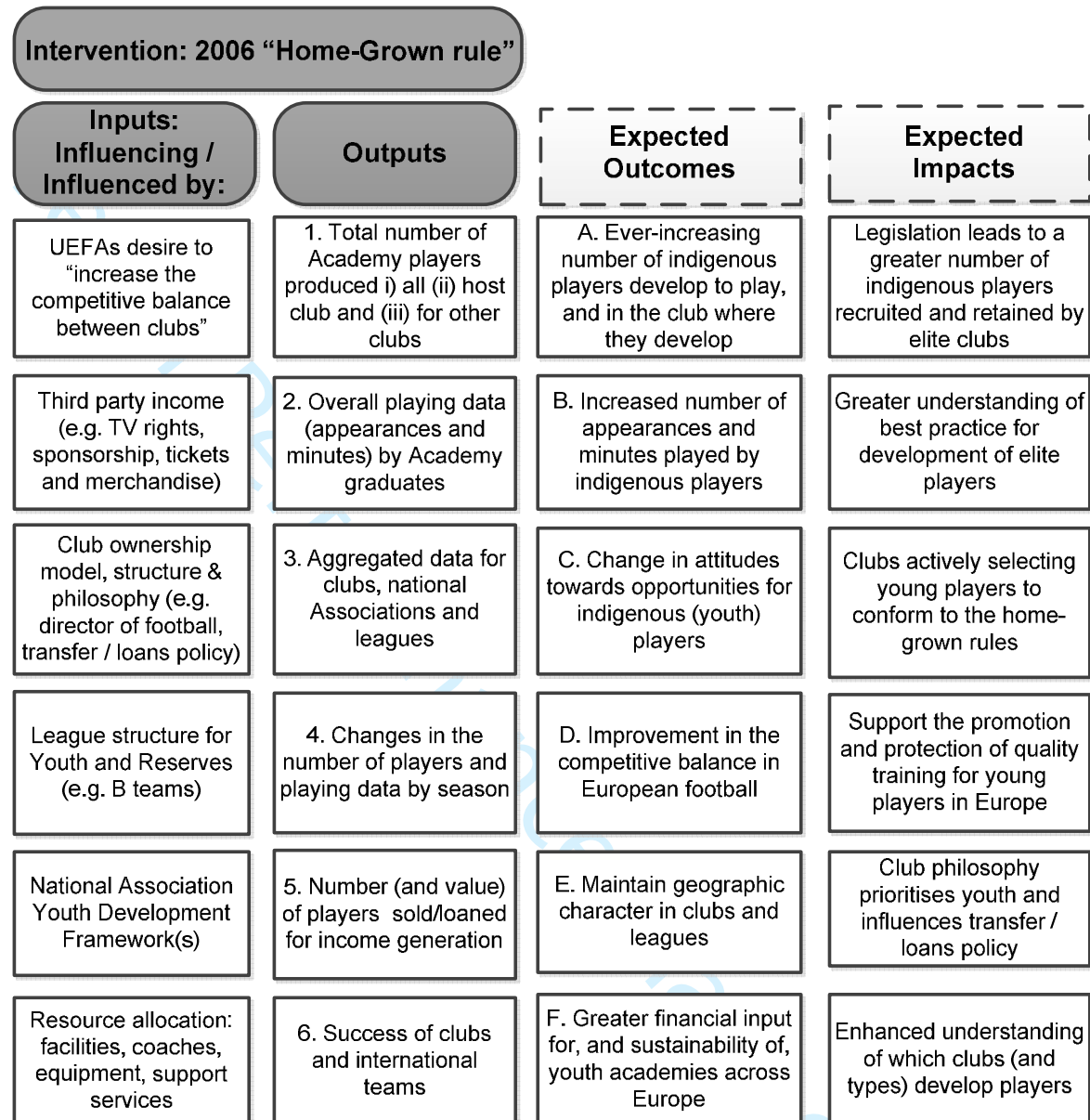


Table 1 Sample of clubs types

| Category (No. Seasons 2006-2016) | FRA | GER | NED | ITA | SPA | ENG |
|---|------------|------------|------------|------------|------------|------------|
| 1. Ever-present clubs (10) | 10 | 9 | 10 | 6 | 8 | 8 |
| 2. Majority of seasons (6-9) | 7 | 8 | 6 | 13 | 11 | 9 |
| 3. Minority of seasons (2-5) | 12 | 6 | 7 | 8 | 8 | 15 |
| 4. One season only (1) | 7 | 10 | 2 | 7 | 8 | 5 |
| TOTAL | 36 | 33 | 25 | 34 | 35 | 37 |

** Group 5 (no top flight experience) is not included here as it is 'zero' for all*

Team Performance Management

Table 2 Total produced - Overall and Same club (Category 1, unless stated)

| Players (#Clubs) | Overall | Players (#Clubs) | Played at parent Club |
|---|--|----------------------------|--|
| 50+ (n=4) | Ajax (99), Feyenoord (71), Barcelona (68), Real Madrid (58). | 30+ (n=3) | Feyenoord, Utrecht (36), Athletic Bilbao (32). |
| 40-49 (n=6) | Athletic Bilbao, Espanyol (44), Utrecht (43), AZ Alkmaar, Lyon, Valencia (41). | 25-29 (n=6) | Ajax (28), Lyon, Vitesse Arnhem (26), Groningen, Nice, Stade Rennes (25), Real Madrid, ADO Den Haag* (24), Espanyol, Atalanta* (23), Toulouse (22), AZ Alkmaar, Barcelona, Sevilla, Real Sociedad* (21), Twente, Excelsior* (20). |
| 34-39 (n=7) | Vitesse Arnhem (39), ADO Den Haag (37), Stade Rennes, Stuttgart (35), Sevilla, Caen, Juventus* (34) | 20-24 (n=11) | |
| No. Mins | Overall | No. Mins | Played at parent Club |
| 300,000+ (n=2) | Ajax (394,025), Feyenoord (319,734). | 100,000+ (n=2) | Feyenoord (118,247), Athletic Bilbao (100,247). |
| 150,000- 299,999 (n=5) | Lyon (188,933), Barcelona (183,148), Athletic Bilbao (182,891), AZ Alkmaar (152,393), Stade Rennes (152,354). | 70,000- 99,999 (n=4) | Ajax (90,463), Stade Rennes (84,733), Real Sociedad* (76,144), Lyon (70,838), |
| 130,000- 145,999 (n=6) | Juventus* (146,921), Stuttgart (146,594), Sparta Rotterdam** (138,182), Bayern Munich (133,250), Real Madrid (132,398), Schalke 04 (130,641), | 50,000- 69,999 (n=9) | Montpellier* (64,000), Toulouse (63,630), Vitesse Arnhem (61,595), Stuttgart (59,899), Utrecht (57,039), Schalke 04 (55,767), Barcelona (54,865), Borussia Mönchengladbach* (53,741), Atalanta* (51,691). |
| * = Category 2; ** = Category 3; *** = Category 4 | | | |

Table 3 Minutes played and averages by club category

| | | | Ever-present clubs | Majority of seasons (6 to 9) | Minority of seasons (2 to 5) | One season |
|---------|-----------|------|---------------------------|-------------------------------------|-------------------------------------|-------------------|
| England | Overall | Mins | 373,873 | 128,376 | 195,117 | 106,569 |
| | | Ave | 46,734 | 14,264 | 13,008 | 21,314 |
| | Same Club | Mins | 94,465 | 60,196 | 32,089 | 7,786 |
| | | Ave | 11,808 | 6,688 | 2,139 | 1,557 |
| France | Overall | Mins | 843,391 | 405,331 | 389,312 | 207,541 |
| | | Ave | 84,339 | 57,904 | 32,443 | 25,943 |
| | Same Club | Mins | 357,355 | 188,293 | 129,763 | 3,090 |
| | | Ave | 35,736 | 26,899 | 10,814 | 386 |
| Spain | Overall | Mins | 1,008,967 | 679,235 | 307,626 | 158,074 |
| | | Ave | 126,121 | 61,749 | 38,453 | 19,759 |
| | Same Club | Mins | 295,447 | 274,197 | 90,871 | 209,321 |
| | | Ave | 36,931 | 24,927 | 11,359 | 26,165 |
| Italy | Overall | Mins | 296,405 | 464,610 | 125,101 | 75,938 |
| | | Ave | 49,401 | 35,739 | 15,638 | 10,848 |
| | Same Club | Mins | 53,511 | 152,795 | 45,098 | 7,005 |
| | | Ave | 8,919 | 11,753 | 5,637 | 1,001 |
| Germany | Overall | Mins | 752,289 | 473,075 | 144,871 | 125,013 |
| | | Ave | 83,588 | 59,134 | 24,145 | 12,501 |
| | Same Club | Mins | 290,082 | 203,158 | 24,266 | 13,631 |
| | | Ave | 32,231 | 25,395 | 4,044 | 1,363 |
| Holland | Overall | Mins | 1,482,339 | 258,016 | 318,812 | 70,255 |
| | | Ave | 148,234 | 43,003 | 45,545 | 35,128 |
| | Same Club | Mins | 504,853 | 117,770 | 96,729 | 9,560 |
| | | Ave | 50,485 | 19,628 | 13,818 | 4,780 |

Table 4 Outputs by 'second team in league' allowance

| | Overall Sample Second Team: 'No' N = 127 Sum (Mean 'per club') | Spain, Holland, Germany, France Second team: 'No' N = 54 Sum (Mean 'per club') | Second Team: 'Yes' N = 73 Sum (Mean 'per club') |
|-------------------|--|--|---|
| Seasons | 683 (5) | 282 (5) | 477 (7) |
| Number of Players | 1,665 (13) | 775 (14) | 1,552 (21) |
| Appearances | 60,575 (477) | 34,184 (610) | 78,698 (1,078) |
| Minutes | 4,080,651 (32,131) | 2,314,662 (41,333) | 5,309,485 (72,733) |
| Same Club No. | 925 (7) | 493 (9) | 908 (12) |
| Same Club Apps | 20,335 (160) | 13,058 (233) | 26,710 (366) |
| Same Club Mins | 1,342,495 (10,571) | 875,920 (15,641) | 1,750,724 (23,983) |
| U16-20 Caps | 10,283 (81) | 4,357 (78) | 11,303 (155) |
| U21 Caps | 3,371 (27) | 1,275 (23) | 3,175 (43) |
| Senior Players | 148 (1) | 59 (1) | 147 (2) |
| Senior Caps | 1,637 (13) | 766 (14) | 1,837 (25) |