Football Club Transfer Networks and Performance

Dennis Coates

Iuliia Naidenova

Petr Parshakov

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IDLAB

NATIONAL RESEARCH UNIVERSITY
HIGHER SCHOOL OF ECONOMICS

Motivation

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- Human Resource policy
  - Labor market: Global vs. Local
  - Labor force mobility: In and out

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  - Labor force mobility: In and out
- We use data on labor market of European football clubs (network of transfers from club to club)
  - European football is the world's most popular sport (Matheson, 2003)
  - High frequency of transfers
  - Broad distribution of teams participating in the market

Networks in Football

- Links between players during training or match (Clemente et al., 2014; Yamamoto and Yokoyama, 2011; Narizuka et al., 2014)
- Links between clubs:
  - and sports performance (Liu et al., 2016; Rossetti and Caproni, 2016)
  - and transfer value (Liu et al., 2016)

Previous results

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They do not control for other determinants of performance

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- to understand how different labor market strategies (global vs. local, in vs. out)
- affect sports and financial performance of football clubs
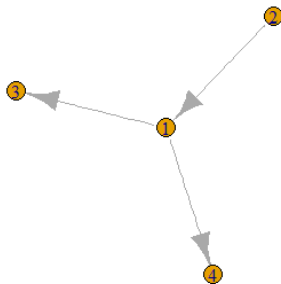
Data

- Leagues:
  - England Premier League
  - Spain LIGA BBVA
  - Germany Bundesliga
  - Italy Serie A
  - Portugal Liga ZON Sagres
  - France Ligue 1
  - Belgium Jupiler League
  - Netherlands Eredivisie
  - Scotland Premier League
  - Switzerland Super League
  - Poland Ekstraklasa
- Seasons: 2008 – 2016
- Dataset is provided by Hugo Mathien (Mathien, 2016)
- Transfer vs. loan

Network characteristics

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Degree:
3, 1, 1, 1

Betweenness:
2, 0, 0, 0

Network of our sample

Scotland Premier League
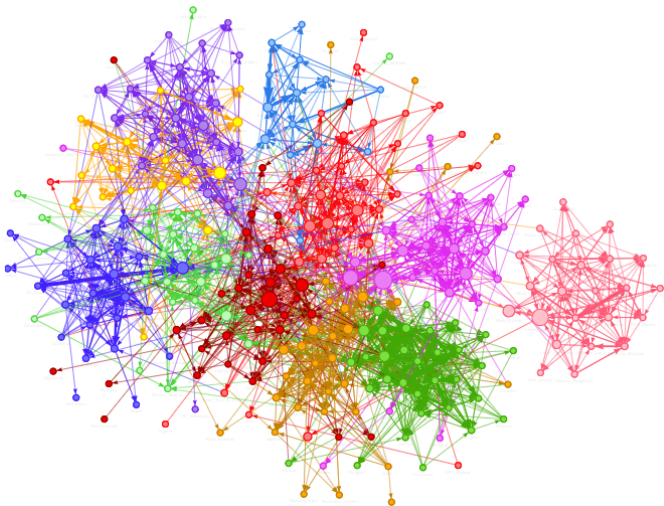France Ligue 1
Italy Serie A
Portugal Liga ZON Sagres
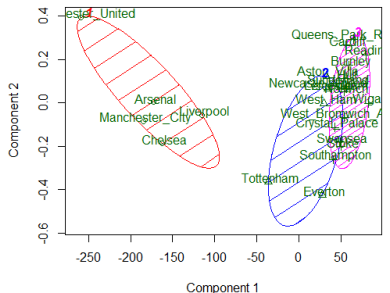Netherlands Eredivisie
Spain LIGA BBVA
Belgium Jupiler League
Poland Ekstraklasa
Germany 1. Bundesliga

EPL example

EPL (ppg, revenue)

These two components explain 100 % of the point variability.

EPL (ppg, revenue, network)
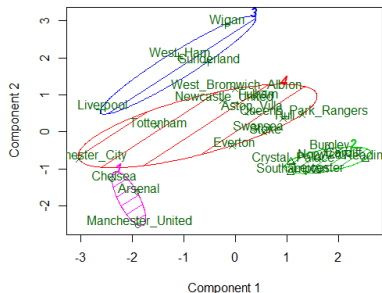
These two components explain 93.45 % of the point variability.

Models

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  - Transfers only between different leagues

Empirical results: In and Out

	PPG	Revenue
in-degree	-2.2512***	156.3558
	(0.762)	(319.456)
out-degree	0.6165	1,066.0922**
	(0.632)	(404.114)
betweeness	-2.5548*	-1,333.9208
	(1.538)	(1,103.047)
players FIFA rating	0.0383***	-1.4231
	(0.005)	(4.129)
strategy variation	-0.0196***	-3.1350
	(0.007)	(3.420)
constant	-1.1886***	240.5152
	(0.385)	(306.679)
Observations	1,106	60
R-squared	0.107	0.204
Number of teamid	272	25

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Empirical results: Global vs. Local

	PPG	Revenue
in-degree between leagues	-2.2087**	-706.0259**
	(0.997)	(282.211)
out-degree between leagues	0.6660	-17.0740
	(1.125)	(249.957)
betweeness between leagues	-0.6826	551.3632**
	(1.306)	(237.006)
in-degree in same league	-2.7172**	-569.7252*
	(1.229)	(278.553)
out-degree in same league	0.5637	623.9566*
	(1.009)	(345.276)
betweeness in same league	-37.0140	-11,150.6490*
	(31.803)	(6,128.056)
control variables	included	included
constant	-1.3151***	258.7505*
	(0.428)	(129.540)
Observations	1,030	59
R-squared	0.113	0.828
Number of teamid	259	24

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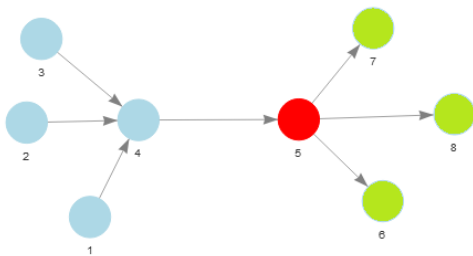
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* Color represents league

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- Our results are robust in terms of the magnitude to the 7% percent of exclusion of clubs and to the 27% of the clubs in terms of the sign of all networks measures in regression equations

Limitations

- We don't observe all leagues and lower divisions
- We don't observe players who do not participate matches
- Financial data only for one league

Thank you for your attention!