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Career Prospects and Effort Incentives: Evidence from Professional Soccer

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It is difficult to test the prediction that future career prospects create implicit effort incentives because researchers cannot randomly "assign" career prospects to economic agents. To overcome this challenge, we use data from professional soccer, where employees of the same club face different external career opportunities depending on their nationality. We test whether the career prospect of being selected to a Euro Cup national team affects players' pre-cup performances, using nationals of countries that did not participate in the Euro Cup as a control group. We find that the Euro Cup career prospect has positive effects on the performances of players with intermediate chances of being selected to their national team, but negative effects on the performances of players whose selection is very probable. Our findings have implications for the incentive effects of within-firm promotions and of external career opportunities.

Keywords: incentives; effort; career concerns; reputation; contests; tournaments; promotions
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1. Introduction

Economists and management scholars have long argued that many incentives arise not through formal contracts but implicitly through career concerns (Fama 1980). According to the theory of implicit incentives (Holmström 1999; Dewatripont et al. 1999a, b), economic agents exert effort in the hope of building a reputation for high ability that pays off in the future. Even in the absence of any explicit incentive contracts, such as pay-for-performance schemes, economic agents may thus work hard to improve their future promotion and employment opportunities.

Although the premise that implicit incentives drive decisions is widely accepted, testing it empirically is challenging. Ideally, empirical research would randomly "assign" future career prospects, such as the opportunity to get promoted to a better paid job, in order to test their impact. However, researchers can hardly preclude a random subset of employees from future promotions or external employment opportunities. Most existing empirical studies of implicit incentives therefore focus on comparative statics results of dynamic career concerns models, mainly with respect to seniority (Gibbons and Murphy 1992, Chevalier and Ellison 1999, Hong et al. 2000). In contrast, this paper considers a situation close to the ideal of randomly assigned career prospects to provide direct evidence that career prospects create effort incentives. More specifically, we analyze a work environment in which a major career prospect arises for only a subset of otherwise similar employees of the same set of firms—professional soccer.

Every four years, national soccer teams from across Europe compete in the Union of European Football Association (UEFA) European Championship (short "Euro Cup"). Participation in this cup represents a major career opportunity for any player.[1] Prior to each Euro Cup, the national team coaches of all participating countries must select a fixed number of players for their Euro Cup teams. Although soccer clubs employ players of many different nationalities, national team coaches can select only nationals of the country that their team represents. An exogenous characteristic, nationality, thus determines whether a player can be selected to a Euro Cup team, regardless of where he is

[1] As we will discuss in more detail, players care about participating in the Euro Cup for both pecuniary (national team bonus payments, endorsement deals, improved salary, and employment prospects after the cup) and nonpecuniary (honor, fame) reasons.

employed. This nationality rule allows us to estimate the effects that the career prospect of being selected to a Euro Cup team has on players' performances by comparing players of different nationalities before and during the Euro Cup national team player selection period. Importantly, all players we consider work in the same national league.

To guide our empirical analyses, we propose a simple game-theoretical model of the rivalry between players for national team slots that combines learning about ability à la Holmström (1999) with a tournament à la Lazear and Rosen (1981). In the model, an attractive position is awarded to the agent perceived as the most able. Each agent can exert effort to increase his expected performance, thereby "jamming the signal" that the decision maker uses to update his beliefs about the agent's ability. The model also incorporates fatigue by assuming that an agent's payoff from winning is decreasing in his effort during the selection period. The key theoretical predictions are (i) that contest participation has a positive effect on the effort of an agent with intermediate winning chances, but (ii) that, due to fatigue concerns, contest participation has a negative effect on the effort of an agent with sufficiently high winning chances.[2]

To test these predictions, we use a detailed panel data set of player-level performances in the First Division of the German Soccer League ("1. Bundesliga") in the two seasons leading up the 2008 Euro Cup. The performance measures fall into two categories. First, observable outputs such as shots on goal and ball contacts. Second, performance grades assigned to players by sports magazines after each game. Since theory predicts that the incentive effects of the Euro Cup career prospect differ between players with different chances of being selected, we also use data on past national team selections to predict players' selection chances.[3] This allows us to investigate how the effect of the Euro Cup career prospect varies with selection chance. The detailed panel data permit inclusion of player fixed effects in all regressions, thereby controlling for skill differences between players.

Consistent with our theoretical predictions, we find that the Euro Cup career prospect had positive and economically significant effects on the performances of players with intermediate chances of being selected for their national team. For instance, the estimated increase in the number of ball contacts for a player with intermediate chances is 16%. For players with very good chances, we find economically important negative effects on performance. For example, the estimated decrease in the number of ball contacts is −19%. As mentioned earlier, negative effects are to be expected if players with almost certain selection chances make it their priority to avoid fatigue and injuries prior to the Euro Cup. Finally, we find no impact of the Euro Cup career prospect treatment on the performances of players without any (or only very few) prior national team appearances, in line with our theoretical predictions. These results are consistent across performance measures.

Our findings have implications beyond the world of professional sports. In particular, soccer players from qualified European nations find themselves in a situation bearing close resemblance to that of employees facing future promotion prospects. First, in both situations the decision-maker's goal is to select the most able agents; hence, agents have incentives to exert effort to impress the decision maker.[4] Second, in many firms the number of available promotions is restricted because of technological or organizational factors (O'Keeffe et al. 1984, Waldman 2013), as is the number of slots on the national team. Employees thus compete against their peers in a contest in which relative perceived abilities determine who gets promoted. Third, although physical injuries are of lesser concern in white-collar occupations than in sports, there is growing evidence that fatigue because of overwork has detrimental effects on future productivity and decision-making ability (Harrison and Horne 2000, Galinsky et al. 2005).[5]

Employees who hope to obtain a promotion thus have incentives to increase or reduce effort for similar reasons as the soccer players in our data. Our empirical findings suggest that effort incentives due to the promotion prospect will be strong for employees who perceive that they have intermediate chances of getting promoted. Employees with very good chances of being promoted in the near future, on the other hand, may actually reduce their effort relative to a situation without any promotion prospect.[6]

[2] Adding the risk of an injury that jeopardize the agent's promotion to the attractive position to the model generates similar negative incentive effects for agents with high winning chances as fatigue.

[3] National teams play occasional friendly matches and qualification matches for cups during the regular season and coaches can select different players for each of these matches.

[4] More generally, promotions may serve two functions: (i) sorting by ability and (ii) incentive provision. However, whenever promotions are coupled with assignments to jobs in which ability matters more, it is (ex post) optimal for a firm to promote the agents with the highest perceived abilities (Rosen 1982, Waldman 1984, Ghosh and Waldman 2010).

[5] Some recent models of multiround tournaments explicitly incorporate the adverse impact of current effort on future performance, either by letting past effort affect success probabilities (Ryvkin 2011) or by imposing a total effort budget across multiple tournament rounds (Harbaugh and Klumpp 2005, Matros 2006).

[6] One would expect the latter effect to be particularly relevant in professions such as management consulting and law, where career concerns are a major driver of incentives. Junior consultants and

The remainder of this paper proceeds as follows. Section 2 discusses the related literature. Section 3 presents the theory used to predict that the treatment effect depends on a player's selection chance. Section 4 discusses the institutional background and the data. Section 5 presents the empirical approach and contains the main results; §5.1 sets out how we rank players by selection chance; §5.2 contains our main findings on the impact of the Euro Cup career prospect for players with different selection chances, employing a variety of empirical approaches; §5.3 takes a closer look at various dimensions of player performance, including measures of destructive effort. Section 6 discusses the empirical strategy and several robustness checks. Section 7 concludes.

2. Related Literature

This paper is related to several strands of the literature. First, it contributes to the empirical literature on implicit incentives by providing direct evidence that future career prospects can have (positive or negative) effects on performance. Existing studies in economics have found evidence consistent with various predictions of dynamic career concern models by comparing workers of different seniority. Gibbons and Murphy (1992) find that the contracts offered to U.S. executives have more explicit pay-for-performance provisions as workers get closer to retirement.[7] Chevalier and Ellison (1999) and Hong et al. (2000) show that current performance is more predictive of rewards for younger fund managers and security analysts, respectively, than for their older counterparts, and that young managers are less likely to take bold actions.[8] A related literature in accounting focuses on the implicit incentive effects of internal promotions. In a study of fast-food retail managers, Campbell (2008) finds that a higher ex ante probability of promotion is associated with improvements in service quality. Ederhof (2011) provides evidence that explicit incentives are stronger for midlevel managers with lower promotion probabilities and concludes that explicit and implicit incentives are substitutes.

Second, our paper relates to the literature on tournaments, because players compete for a limited number of national team slots. Using data from a dynamic tournament among the retailers of a commodities manufacturer, Casas-Arce and Asis Martinez-Jerez (2009) find that effort incentives are strongest for retailers in intermediate positions and weakest for retailers with very high or low winning chances. Similarly, Brown (2011) shows that superstar Tiger Woods' participation in golf tournaments adversely affects the performances of his rivals, which is consistent with effort incentives being stronger for players with intermediate chances than for players with low chances.[9] Bull et al. (1987) and Schotter and Weigelt (1992) provide laboratory experimental evidence on effort levels in asymmetric tournaments.[10]

Several important differences to our work are worth pointing out. First, these studies deal with tournaments designed to elicit effort or provide entertainment for an audience. National team coaches, on the other hand, have as their main goal to select the best players, similar to employers who seek to promote high ability agents to tasks in which ability matters more.[11] Second, unlike our setting, which allows us to compare the evolutions of performances of contest participants (players from nations that participate in the Euro Cup) and nonparticipants (players from nations that do not participate in the Euro Cup) to estimate the impact of contest participation, existing studies of tournaments are by their nature restricted to tournament participants. Third, in contrast to existing contributions, we find that contest participation can have negative incentive effects.

law associates often work long hours and suffer from sleep deprivation (Landers et al. 1996, Ferrer 2008). Moreover, promotions are typically coupled with more responsibility and larger projects. An employee who is confident that she will be promoted in the near future may therefore rationally decide to "take it easy" for a while to be well rested for the new tasks ahead.

[7] Implicit and explicit incentives are substitutes in models where effort and ability enter the production function additively. However, as shown by Dewatripont et al. (1999a), explicit and implicit incentives can be complements if effort and ability enter the production function multiplicatively.

[8] More recent contributions in economics include Coupé et al. (2006) who find that academic economists tend to be more productive early in their careers, and Hansen (2009) who finds that teachers with shorter tenure take fewer sick days.

[9] Sunde (2009), Nieken and Stegh (2010), and Franke (2012) also use data from sports tournaments (tennis, hockey, and golf, respectively) to examine the relation between the heterogeneity of contestants and effort. Earlier empirical work on tournaments focuses on whether larger prize differentials induce higher effort. Ehrenberg and Bognanno (1990) and Orszag (1994) provide evidence from golf tournaments, Becker and Huselid (1992) look at auto racing, and Knoeber and Thurman (1994) examine the impact of tournament-style contracts in the broiler industry.

[10] More recent work by List et al. (2014) combines theory with evidence from lab and field experiments to study optimal group size in tournaments.

[11] Although promotions in firms are often modeled as tournaments, a tournament based on observed performances cannot replicate a contest based on perceived abilities unless all agents are perfectly symmetric. First, the decision maker will not necessarily want to promote the agent who performs best during the contest if that agent starts out with a low initial perceived ability. Second, imposing a handicap on players with low initial perceived abilities (as in O'Keeffe et al. 1984 or Meyer 1991, 1992) does not suffice to reestablish equivalence to a performance tournament, because it ignores that the decision maker may update his beliefs about different agents' abilities at different rates depending on his prior information.

Finally, there is a related literature that uses soccer players to study decision making and test economic theory. Chiappori et al. (2002) and Palacios-Huerta (2003) analyze data on penalty kicks to test the theory of mixed-strategy play, and Palacios-Huerta and Volij (2008) and Levitt et al. (2010) use soccer players as subjects in laboratory experiments to examine whether their play is more consistent with the predictions of mixed-strategy equilibrium than that of other subjects.[12] Garicano and Palacios-Huerta (2014) use data from the Spanish soccer league to show that higher prize differentials increase not only productive but also destructive effort (fouls) in a tournament.[13] Miguel et al. (2011) find a relationship between the extent of civil conflict in a player's home country and violent behavior on the field. Although they explore a very different question than our paper, their approach is related to ours in that it exploits the international compositions of professional teams. Similarly, Kleven et al. (2013) exploit that the job market for players is international to analyze the impact of tax rates on migration decisions.

3. Theory

Suppose there are two agents (for instance, employees of the same firm or soccer players of the same nationality) competing for an attractive position (a promotion to a better paid job or a slot on the national team) awarded at the end of a fixed time period. The decision is made by a principal (the employer or national team coach) whose objective is to select the most skillful agent.

Our theoretical model combines a tournament à la Lazear and Rosen (1981) with learning about ability as in Holmström (1999). Let η_j denote agent j's ($j \in \{1,2\}$) skill level, which is constant over the relevant time period. The principal and the agents share the same prior beliefs. Specifically, the prior η_j follows a normal distribution with mean m_j and precision (equal to the inverse of the variance) $h_j > 0$. The prior distributions of η_1 and η_2 are independent. Learning about η_j occurs through the observation of j's performance. For simplicity, we consider learning in a single time period, in which agent j's output is given by

$$y_j = \eta_j + a_j + \varepsilon_j,$$

where $a_j \in [0,\infty)$ is j's effort, unobservable to the principal and agent $k \neq j$.[14] The stochastic noise terms ε_1 and ε_2 follow independent normal distributions with mean zero and precision $h_\varepsilon > 0$.

The principal's objective is to select the most skillful agent. After observing y_1 and y_2 the principal will hence select $j \neq k$ whenever

$$E[\eta_j \mid y_j] > E[\eta_k \mid y_k].$$

The (expected) prize that j receives if the principal selects him is $W(a_j) > 0$. Because of fatigue, current effort weakly lowers expected future performance and thereby the prize: $W' \leq 0$.[15]

The expected payoff of agent $j \neq k \in \{1,2\}$ is

$$\Pr\{E[\eta_j \mid y_j] > E[\eta_k \mid y_k]\}W(a_j) + S_j(a_j) - c_j(a_j),$$

where $S_j(a_j)$ is j's expected gross payoff in the absence of the contest and $c_j(a_j)$ his disutility of effort. We assume that $S_j(a_j) - c_j(a_j)$ is strictly concave and reaches its unique maximum at

$$a_j^n > 0,$$

the "normal" effort level of player $j \in \{1,2\}$. Moreover, $\lim_{a\to 0} S_j'(a) - c_j'(a) = \infty$.

The formal derivation of the Bayesian Nash equilibrium and the comparative statics of the equilibrium effort levels (a_1^*, a_2^*) are relegated to Online Appendix A (available as supplemental material at http://dx.doi.org/10.1287/mnsc.2015.2211). The main results are as follows:

Proposition 1. *Suppose that the expected payoff functions are strictly concave. Then there exists a unique Bayesian Nash equilibrium with* $a_1^*, a_2^* > 0$. *For all* $j = 1, 2$:[16]

(i) $\lim_{m_j\to-\infty} a_j^* = a_j^n$.

(ii) $\lim_{m_j\to\infty} a_j^* = a_j^n$ *if* $W'(a_j^n) = 0$, *and* $\lim_{m_j\to\infty} a_j^* < a_j^n$ *if* $W'(a_j^n) < 0$.

(iii) *There exists a unique* $\hat{m}_j \leq m_k$ *such that* $da_j^*/dm_j > (<) 0$ *if and only if* $m_j < (>)\hat{m}_j$. *If* $W' = 0$ *everywhere, then* $\hat{m}_j = m_k$. *If* $W' < 0$ *everywhere, then* $\hat{m}_j < m_k$.

Figure 1 depicts the equilibrium relation between agent 1's winning probability and effort as his prior reputation m_1 varies in a numerical example. The horizontal line indicates the normal effort level a_1^n the player would exert in the absence of the contest. The equilibrium effort is increasing in the agent's equilibrium winning probability at low winning chances,

[12] Data on penalty kicks have also been used to test theories of psychological pressure (Apesteguia and Palacios-Huerta 2010, Kocher et al. 2012) and action bias (Bar-Eli et al. 2007).

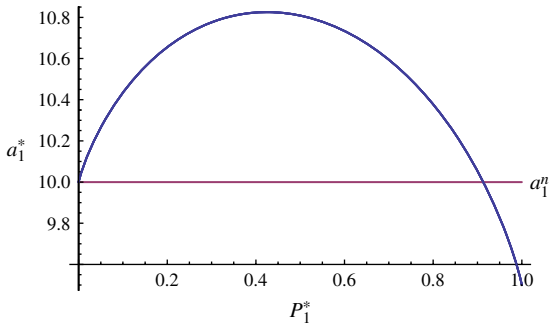
[13] We find that the Euro Cup career prospect leads to less destructive effort by players with high national team selection chances—see §5.3.2.

[14] In the soccer team selection context, unobservable effort can be thought of as motivation and concentration during matches and training, lifestyle choices (nutrition, sleeping,...), and the intensity of training activities that are unobservable to the national team coach.

[15] For technical reasons, we also assume that effort reduces the prize from winning at a decreasing rate ($W'' \geq 0$) and that $W'(0)$ is finite.

[16] The equilibrium effort levels depend only on the difference $m_1 - m_2$, not on m_1 and m_2 individually. All of the results in Proposition 1 could be expressed as comparative statics with respect to $m_j - m_k$ instead of m_j.

Figure 1 **(Color online) Equilibrium Relation Between Agent 1's Effort Level a_1^* and His Winning Probability P_1^***



Note. $W(a) = 10 - 0.5a$ for $a < 18$ and $W(a) = 1$ for $a \geq 18$, $m_2 = 1$, $h_1 = h_2 = 2$, $h_e = 1$, $S_j(a) - c_j(a) = 10a - a^2/2$ for $j = 1, 2$.

but decreasing at high winning chances. Moreover, because the agent is concerned with avoiding fatigue, the equilibrium effort lies below a_1^n if agent 1's equilibrium winning probability is sufficiently close to 1 and reaches its maximum at a winning chance below 0.5.[17]

In summary, the theoretical model yields the following predictions regarding the effort incentives of soccer players that compete for national team slots:

1. The prospect of being selected to play for the national team has a negligible impact on the effort incentives of players with weak chances of being selected.

2. The prospect of being selected to play for the national team has a positive impact on the effort incentives of players with intermediate chances of being selected.

3. The prospect of being selected to play for the national team has a negative impact on the effort incentives of players with high chances of being selected if fatigue and/or injury concerns are important, and a negligible impact otherwise.

4. Institutional Background and Data

4.1. Institutional Background

Professional soccer players are employed by soccer clubs under fixed-term contracts at negotiated salaries. When a player moves between clubs, his old contract is terminated and a new one negotiated; moves prior to contract expiration require the player's new club to pay a transfer fee to his current club.[18] The job market for professional soccer players is international and many players work outside their home country.

In addition to playing for his club, a player can be selected to play for his national team in international tournaments during national league summer breaks and in occasional (friendly or tournament-qualification) games throughout the year. National teams differ from clubs in that only nationals of the country that the team represents can play for them. The most important international tournaments between national teams are the UEFA Euro Cup and the International Federation of Association Football (FIFA) World Cup, which each take place every four years.

There are at least three reasons why participating in a Euro Cup represents a major career prospect for any player. First, there are direct pecuniary rewards to playing in a Euro Cup. Most national associations award bonus payments (based on team performance) to national team players.[19] In addition, a Euro Cup participation often leads to lucrative endorsement deals for players: for example, the Euro 2008 witnessed an advertising battle between Adidas and Nike, both featuring key national team players in their TV commercials (see Edwing 2008). Second, previous research (Lucifora and Simmons 2003; Frick 2006, 2007; Deutscher and Simmons 2012) has shown that Euro and World Cup participations are associated with subsequent increases in salary and transfers to higher ranked clubs.[20] Third, there are nonpecuniary rewards in the form of fame and honor that probably matter a great deal to many players.[21]

Our empirical analyses will focus on players who worked for clubs in the First Division German soccer league (1. Bundesliga) in the time period between the end of the 2006 World Cup (July 9, 2006) and the end of the 2007/2008 soccer season on May 17, 2008.

[17] Injury concerns are another reason why agents with high winning chances may want to exert lower than normal effort. Formally, the model with fatigue is equivalent to a model with injury risk if $W(a) = W[1 - r(a)]$, where $W > 0$ is a fixed prize and the agent's injury risk is the increasing function $r(a) \in [0, 1)$. A small difference between the two models arises if each agent also anticipates that he might get selected because the other agent is injured, even if the other agent has a higher perceived ability. Now the incentive to reduce effort can also arise for an underdog who has a winning chance close to zero conditional on his opponent remaining injury free. However, the underdog's incentive to reduce effort is much smaller than that of an agent with a winning probability close to 1 (conditional on no injuries) as an injury by the frontrunner affects the contest outcome with a higher probability.

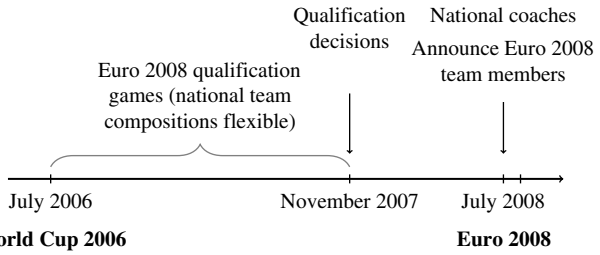
[18] Mechanisms such as player drafts, free agent pools, or player trades, which are common in U.S. major sports leagues, do not exist.

[19] Each player selected for the German team was promised 250,000 euros for winning the Euro 2008, 50,000 euros for reaching the final eight, 100,000 euros for the semifinals and 150,000 euros for getting to the final. The Romanian football federation, with the help of a wealthy club owner, offered 500,000 euros per player if Romania reached the quarter finals and 5.5 million euros if they won the tournament (see Ashdown et al. 2008).

[20] For a discussion of this in the popular press, see Scott (2008).

[21] The final of the Euro 2008 between Spain and Germany drew an estimated TV audience of 237 million, and a successful cup often propels players to celebrity status in their home countries.

Figure 2 Timeline



The 2008 Euro Cup, also called Euro 2008, started on June 7, 2008. The Bundesliga is well suited for our purposes, because it was the best represented national league in the Euro 2008.

As illustrated in Figure 2, the qualification matches for the Euro 2008 began shortly after the 2006 World Cup. All 50 eligible European national teams participated in them. The qualification period ended on November 21, 2007, but some teams already qualified de facto before that date having won sufficiently many matches: a group of four countries (Czech Republic, Germany, Greece, and Romania) qualified about one month before the official date, on either the 13th or 17th of October, and 10 other nations qualified on the 17th or 21st of November. The two remaining participants were Austria and Switzerland, the host nations, which participate automatically.

For the Euro 2008, each national team coach had to select a fixed roster of 23 players. The deadline for the coaches' announcements of their team selections was 11 days after the end of the 2007/2008 German soccer season, and the large majority of coaches announced their decisions after the last game day or between the last two game days of the season.

4.2. Data

We use a panel data set that contains detailed player-game day level information about the German Soccer League (1. Bundesliga) in the seasons 2006/2007 and 2007/2008.[22] For each of the 612 games during the sample period, the data contain individual output measures for all players that were either on the field or on the reserve bench.[23] We matched this data set with data about individual injuries collected by the online fantasy soccer website comunio.de. In addition, we collected data on all national team participations of players in our sample between summer 2005 and the Euro 2008 using publicly available sources.[24]

[22] The data were kindly provided by IMIPRE AG, a company specialized in collecting and selling soccer data.

[23] On average, Bundesliga teams employ 29 players. Eleven players are on the field at any given point in a game, and the maximum number of player substitutions per game is three.

[24] We used ESPNsoccernet.com, FIFA.com, Kicker.de, Worldfootball.net, footballdatabase.eu, and the sites of national soccer associations.

4.2.1. Player Sample. The full Bundesliga data set contains 767 players accounting for a total of 21,906 observations at the player-game day level. We restrict attention to players for whom we have observations before and after the official Euro 2008 qualification date (November 21, 2007) and in each of the two seasons in the sample period, and for whom at least one output observation is strictly positive. Moreover, we dropped observations of goalkeepers (83 players), because they perform different tasks than field players and many of our output measures do not apply to them. Finally, we excluded the 21 players from the Euro 2008 host nations Austria and Switzerland, as their national teams were already (automatically) qualified for the Euro 2008 at the beginning of the sample period. The final number of players is 225 and the total number of observations is 11,316.[25]

Table 1 lists the players' nationalities.[26] The treatment group *euro* consists of the 148 players whose nations participated in the Euro 2008. The 77 remaining players are in the control group *noneuro*, which includes non-Europeans whose national teams are excluded from the Euro Cup by UEFA rules and Europeans whose teams did not qualify. About half the players are German; the others come from all over the world.

4.2.2. Performance Measurement. The Bundesliga data contain a variety of individual outputs that are meaningful measures of performance: passes received, ball contacts, shots on goal, goals, and duels won. Passes received counts the number of passes a player receives from his teammates in a game. It is a good indicator of how active and fit a player is, and of his teammates' trust in his ability to make a valuable contribution. Ball contacts is a more aggregate measure of how involved a player is and also reflects a player's success in obtaining the ball. Goals is a natural performance measure because the ultimate objective in soccer is to score goals (and prevent goals by the opponent); however, it is not unusual for games to end without any goals and this measure has a highly skewed distribution. We therefore

[25] An observation in our data is conditional on a player's availability. That is, players with suspensions or sickness are treated as having a missing observation on a given game day. The underlying causes of such absences are less in the players' control than our performance measures and we assume they are missing at random.

[26] A small number of players in our sample hold multiple citizenships. Because FIFA rules prohibit switching national team allegiances after playing in a competitive international game at the senior level, we assign any player with a past national team game the nationality of his team. Otherwise, we assign the nationality of the country where the player grew up. Up to 2009, any change in allegiance had to happen by age 21, an early point in a player's career, and, to the best of our knowledge, no player in the sample faced the choice between two different national teams during the sample period.

Table 1 Number of Players by Nationality

Euro		*Noneuro*		*Noneuro*		*Noneuro*	
Czech Republic	8	Albania	2	Egypt	1	Namibia	1
Croatia	6	Algeria	1	Finland	1	Nigeria	1
France	2	Argentina	5	Georgia	1	Paraguay	2
Germany	108	Australia	2	Ghana	1	Peru	1
Greece	3	Belgium	3	Guinea	1	Serbia	3
Netherlands	5	Bosnia-Herzegovina	3	Hungary	2	Slovakia	3
Poland	5	Brazil	17	Iran	2	South Africa	1
Portugal	3	Cameroon	2	Ivory Coast	3	Tunisia	2
Romania	2	Canada	1	Japan	1	Uruguay	1
Russia	1	China	1	Macedonia	2	USA	1
Sweden	2	Denmark	7	Mexico	2		
Turkey	3						
All euro 2008: 148				All noneuro 2008: 77		Total: 225	

Note. The sample excludes goalkeepers, players of Austrian or Swiss nationality, or players for whom we have observations in one season only or only either after or before the official Euro 2008 qualification date.

use shots on goal, which includes both actual goals and failed goal attempts, as another key measure of offensive performance. A duel is a situation in which two players fight for the ball in direct confrontation and counts as won if the player or one of his teammates end up obtaining the ball. Duels won measures physical fitness and dedication.

The data also include detailed information on player substitutions, which allows us to determine whether a player was a "starter" (i.e., on the field at the start of the game) and to compute the number of minutes each player spent on the field.[27] It makes sense to view both the number of minutes played and whether a player was a starter as additional performance measures, because club coach's substitution decisions are influenced by player's performances on the field and during training.[28] Finally, the data report fouls and yellow/red cards that soccer referees use to indicate and punish fouls. We will use these to test whether the Euro 2008 career prospect had any effect on destructive effort or sabotage aimed at players of the opponent team.

In addition to the objective measures listed so far, we collected the grades that the soccer magazines *Kicker* and *Sportal* assign to players after each game. Grades have the advantage of providing an overall assessment of a player's multidimensional performance; however, they are subjective judgments and may hence be biased. We use the mean of the grades from two different magazines as we expect that averaging mitigates some of these biases. Grades are expressed as numbers between 0 (insufficient) and 5 (excellent).[29]

For ease of exposition, we will also use a performance index equal to the sum of the individual performance measures passes received, ball contacts, shots on goal, goals, duels won, and mean grade, standardized by their means and standard deviations.[30] Table 2 reports the correlations between the various output measures. All correlations are positive, but some are weak, suggesting that different output measures capture different dimensions of performance.

Table 3 presents summary statistics for players in the control (*noneuro*) and treatment (*euro*) groups. All statistics refer to Bundesliga club games. As a first observation, it should be noted that in the prequalification period *noneuro* players performed slightly better and spent more time on the field than *euro* players, whereas these rankings were reversed in the postqualification period.

5. Empirical Analysis

5.1. Measurement of Heterogeneous National Team Selection Chances

Our theory predicts that the Euro Cup career prospect affects the effort incentives and hence performances of

[27] Coaches are allowed to make at most three substitutions per game, and typically make use of this possibility at least twice. Approximately 80% of substitutions take place in the last third of a game.

[28] We will also use the data on minutes played to test whether the Euro 2008 career prospect had an effect on performance *per minute* for those players with field appearances.

[29] When a player does not receive a grade for a game because he spent either the entire time in reserve or fewer than 30 minutes (the magazines' cut-off level) on the field, we assign an "insufficient" (0) to the player for this game. A soccer game lasts 90 minutes, plus potentially a few minutes of additional time to make up for delays.

[30] To facilitate the interpretation of results, we standardize the sum of the six (standardized) performance measures once more so that the performance index also has a standard deviation of 1.

Table 2 Correlations Between Performance Measures

Variables	Index	*Passes received*	*Ball contacts*	*Shots on goal*	*Goals*	*Duels won*	*Grades*	*Minutes played*	*Starter*	*Index per minute*	*Yellow/red card*	*Fouls committed*
Passes received	0.81	1.00										
Ball contacts	0.84	0.91	1.00									
Shots on goal	0.63	0.35	0.29	1.00								
Goals	0.47	0.10	0.07	0.40	1.00							
Duels won	0.78	0.60	0.74	0.32	0.12	1.00						
Grades	0.84	0.58	0.66	0.42	0.39	0.63	1.00					
Minutes played	0.83	0.72	0.85	0.36	0.14	0.79	0.75	1.00				
Starter	0.75	0.67	0.78	0.32	0.12	0.72	0.67	0.92	1.00			
Index per minute	0.73	0.57	0.56	0.50	0.40	0.51	0.64	0.46	0.38	1.00		
Yellow/red card	0.13	0.11	0.16	0.04	0.01	0.16	0.11	0.18	0.18	0.09	1.00	
Fouls committed	0.38	0.30	0.36	0.17	0.07	0.43	0.34	0.45	0.43	0.23	0.33	1.00
Fouls suffered	0.48	0.38	0.41	0.25	0.10	0.57	0.37	0.44	0.41	0.33	0.12	0.28

Note. The sample excludes goalkeepers, players of Austrian or Swiss nationality, or players for whom we have observations in one season only or only either after or before the official Euro 2008 qualification date.

players who have a chance to make it into a Euro Cup national team. The predicted effect is positive for players with intermediate chances whose priority is to impress the national team coach, but small or even negative for players with very good chances, because their priority is to avoid fatigue and injuries prior to the cup.

To allow for such heterogeneous effects in the subsequent empirical analyses, we use data on players' national team selections prior to the Euro 2008 qualification decisions. Because past national team selections are based on national team coaches' perceptions of players' skills, one would expect players with many (especially recent) past selections to have greater future chances of being selected for the Euro 2008 than players with few or no past national team selections. For each player i, we therefore compute

$$\begin{aligned} &\textit{selection ratio}_i \\ &\quad = (\text{number of } i\text{'s field appearances in national team games})/(\text{total number of games played by } i\text{'s national team}) \end{aligned}$$

in the 30 months leading up to the Euro 2008 qualification decisions.[31] Since recent selections are likely to be more informative about a player's chance of a Euro 2008 selection than more distant selections, we also divide the 30 months prior to the Euro 2008 qualification decisions into five six-months windows and compute selection ratio for each.[32]

Table 4 shows the results of logit regressions of actual Euro 2008 team selections on selection ratio.[33] The estimates confirm that Euro 2008 team selections were highly correlated with past selections: the model in column (1) with selection ratio over the entire 30 months as the only regressor predicts 93% of selections correctly. Column (2) shows that recent selections are more predictive than more distant selections. Only the two most recent selection ratio variables have significant estimated coefficients, and the selection ratio for the six months closest to the qualification decisions has the highest estimated coefficient.

For subsequent analyses, we will use fitted values from the logit regression in column (2) of Table 4 to rank players based on their national team selection chances. Table A.1 in the appendix reports the predicted selection chances (henceforth "selectchance") based on this regression along with actual Euro 2008 selections for players in the *euro* group. With the exception of one player (Bernd Schneider) who suffered a severe injury just before the championship, all *euro* group players with selectchance greater than 0.9 indeed played in the Euro 2008. Out of the 5 *euro*

[31] National team games include friendly games, qualification games for international tournaments, and games in other tournaments. National team coaches often select less established players for friendly games, so inclusion of friendly games helps us identify players with relatively low but positive selection chances, who may have particularly strong incentives to impress. Only actual field appearances are used to compute selection ratio because we were unable to obtain the full list of reserve players for some national team games.

[32] As mentioned earlier, some nations already qualified for the Euro 2008 a couple of weeks prior to the official qualification date on November 21, 2007; we use these de facto qualification dates as the end dates for computing selection ratio for players in the *euro* group. For players in the control group, national team games until the official qualification date are included. None of our results would change if we used the official qualification date as the cutoff date for all players.

[33] Only *euro* group players were included in these regressions, because players in the control group could not participate in the Euro 2008, so the dependent variable is meaningless for them.

Table 3 Summary Statistics

	Euro		*Noneuro*	
$N = 11{,}316$	Mean	Std. dev.	Mean	Std. dev.
Prequalification				
Defense (dummy)	0.35	0.48	0.39	0.49
Midfield (dummy)	0.47	0.50	0.39	0.49
Forward (dummy)	0.19	0.39	0.21	0.41
Game starter	0.83	0.37	0.69	0.47
Minutes played	64.94	35.30	67.12	33.78
Performance index	5.80	5.13	6.17	5.31
Passes received	19.80	14.72	20.98	14.96
Ball contacts	40.07	26.07	42.44	26.23
Shots on goal	1.06	1.42	1.13	1.42
Goals	0.10	0.33	0.11	0.35
Duels won	8.76	6.17	9.35	6.07
Journalist grade	1.90	1.20	1.99	1.78
Yellow/red card	0.13	0.33	0.13	0.34
Fouls committed	1.31	1.37	1.32	1.43
Fouls suffered	1.40	1.44	1.10	1.35
Postqualification				
Defense (dummy)	0.37	0.48	0.39	0.49
Midfield (dummy)	0.47	0.50	0.43	0.50
Forward (dummy)	0.16	0.37	0.18	0.39
Game starter	0.85	0.35	0.56	0.50
Minutes played	62.22	36.74	61.09	36.89
Performance index	5.55	5.23	5.40	5.05
Passes received	19.68	15.46	20.11	16.13
Ball contacts	39.19	26.95	40.33	28.45
Shots on goal	0.97	1.37	0.94	1.33
Goals	0.10	0.34	0.08	0.31
Duels won	8.32	6.10	8.37	6.10
Journalist grade	1.80	1.24	1.78	1.25
Yellow/red card	0.13	0.33	0.10	0.30
Fouls committed	1.16	1.20	1.15	1.36
Fouls suffered	1.27	1.26	1.01	1.29
Age	26.81	4.08	28.75	3.38

Notes. The sample contains 148 euro players ($N = 7{,}496$) and 77 noneuro players ($N = 3{,}820$). Player age is measured on May 17, 2008, the last game day preceding the Euro 2008. The sample excludes goalkeepers, players of Austrian or Swiss nationality, or players for whom we have observations in only one season or only either after or before the official Euro 2008 qualification date. Prequalification designates the time period prior to the official Euro 2008 qualification date.

group players with selectchance between 0.8 and 0.9, 4 (or 80%) were selected for Euro 2008, whereas only 44% of the 16 players with selectchance between 0.1 and 0.8 participated in the cup. Finally, only 2 out of the more than 100 players with very low predicted chances (selectchance < 0.1) were selected for the Euro 2008. In our sample, selectchance > 0 for 56 out of the 148 players in the treatment group, and for 62 of the 77 players in the control group. Conditional on being positive, the mean value is 0.59 in the treatment group and 0.56 in the control group.

Table 4 Logit Regression of Euro 2008 National Team Selection

	Dependent variable: *Euro 2008 selection*	
	(1)	(2)
Selection ratio (0–30 months before)	0.56***	
	(0.088)	
Selection ratio (0–6 months before)		0.21***
		(0.054)
Selection ratio (6–12 months before)		0.11**
		(0.055)
Selection ratio (12–18 months before)		0.13
		(0.121)
Selection ratio (18–24 months before)		−0.01
		(0.075)
Selection ratio (24–30 months before)		0.02
		(0.090)
Constant	−0.23***	0.23***
	(0.035)	(0.035)
N	148	148
Percent correctly predicted	0.93	0.95
Pseudo R^2	0.60	0.75
Log likelihood	31.99	19.83

Notes. This table reports marginal effects for logit regressions of Euro 2008 team selection on selection ratio. Robust standard errors in parentheses.
**Significant at the 5% level; ***significant at the 1% level.

5.2. Performance Impact of the Euro 2008 Career Prospect

5.2.1. Trends in the Raw Data. Since theory predicts that the impact of the Euro 2008 career prospect depends on a player's selection chance, as a first step we divide players into three subsamples according to selectchance. The cutoffs are based on tertiles in the sample of all players with selectchance > 0, which results in selectchance cutoff values of 0.29 and 0.91.[34]

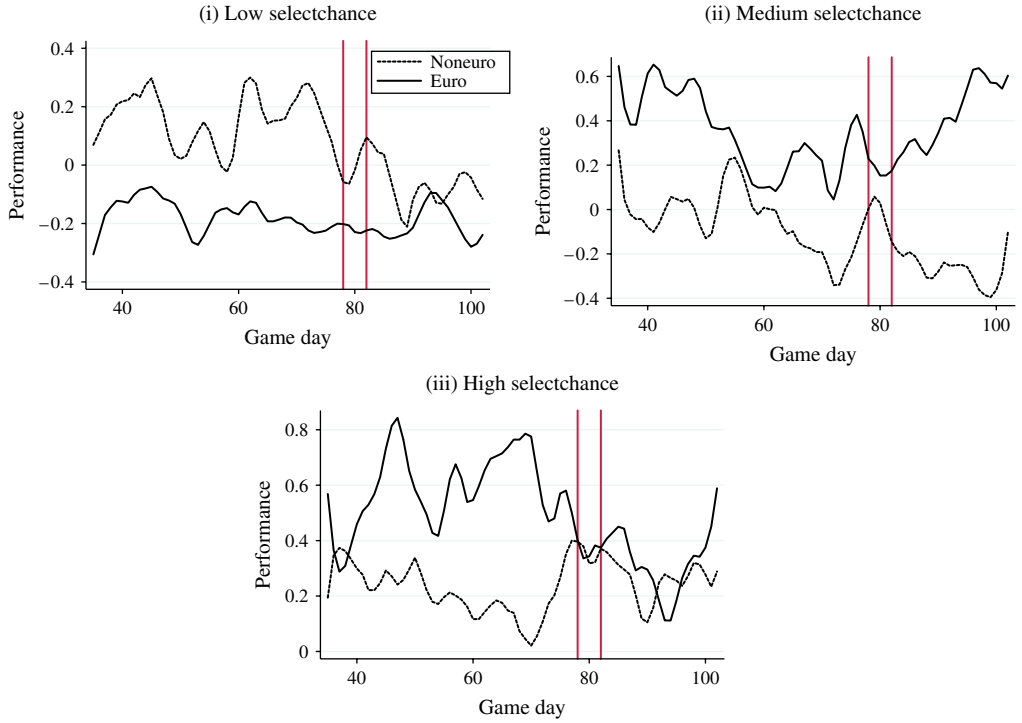
Table A.2 in the appendix shows summary statistics for the three selectchance subsamples. In the postqualification period, we observe a performance increase (decrease) of treatment group players relative to control group players in the medium (high) selectchance subsample.

Figure 3 plots the performance index over time in each selectchance subsample. The two vertical lines indicate the time window of (de facto) Euro 2008 qualification decisions.[35] For players with medium selectchance values, the treatment and control groups evolve similarly in the prequalification period, but

[34] Percentiles are determined using only players with selectchance > 0 because past national team selections do not allow us to rank players with selectchance $= 0$ in terms of their likelihood of making their national team. Online Appendix B contains results for a division of the sample into four strata based on quartiles.

[35] As mentioned, some countries qualified for the Euro 2008 prior to the official qualification date.

Figure 3 **(Color online) Player Performance Over Time—Smoothed (Lowess with Bandwidth 0.1)**



there is a clear divergence postqualification, with treated players improving relative to control group players. For players with high selectchance values, on the other hand, we observe a decrease in the performance of the treatment group post qualification. The figures for players with medium and high selectchance values provide a first indication that players' performances indeed responded to the career prospect of being selected to play in Euro 2008 and that players differed in their responses depending on their selection chance.

5.2.2. Basic Regression Analysis. To control for potential confounding factors that may drive the trends in the raw data, we estimate, for each of the three selectchance subsamples defined in the last subsection, the following regression equation that includes player fixed effects and several time-varying control variables:

$$Y_{it} = \delta_0 euro_i \times post_{it} + \gamma_i + \alpha_t + X'_{it}\beta + \varepsilon_{it}, \qquad (1)$$

where Y_{it} is player i's performance on game day t. The treatment interaction term $post_{it} \times euro_i$ equals 1 if and only if player i's nation is qualified for Euro 2008 at time t.[36] The coefficient of primary interest will be δ_0.[37] The player fixed effects γ_i pick up (time-invariant) skill differences between players, and the game day fixed effects α_t control for changes in playing conditions over time that affect all clubs. The vector of covariates X_{it} includes dummies that indicate the club the player currently works for,[38] and dummies that indicate the opponent team i's club faces on day t. Moreover, X_{it} includes field position dummies, as players sometimes occupy different positions (forward, midfield, or defense) in different games. Finally, X_{it} includes a $homegame_{it}$ dummy indicating whether i's current club plays in its home stadium on day t, and an $injured_{it}$ dummy equal to 1 if player i played injured or weakened from a past injury on game day t.[39]

[36] For treatment group players ($euro_i = 1$), $post_{it}$ equals 1 from the day of i's nation's de facto qualification for Euro 2008. For control group players ($euro_i = 0$), $post_{it}$ equals 1 from the official Euro 2008 qualification date (November 21, 2007) onward. None of the results would change if for all i we set $post_{it}$ equal to a player-invariant dummy $post_t$ indicating the time period after the official qualification date.

[37] To eliminate bias due to incorrect weighting in the fixed effect estimate (Gibbons et al. 2014), we estimate δ_0 by interacting player dummies with the treatment term to obtain δ_{0i} and, in a second step, computing the sample-weighted average treatment effect following Wooldridge (2005), $\delta_0 = \sum_i (N_i/N)\delta_{0i}$.

[38] Several players moved between Bundesliga clubs in the sample period.

[39] It should be noted that our Bundesliga data set contains only observations for players who were either on the reserve bench or on the field. However, there will be missing observations for a player who misses games altogether because of an injury.

Table 5 Treatment Effects in Each Selectchance Subsample

	Dependent variable: *Performance index*			
	(1)	(2)	(3)	(4)
Low selectchance (no. of observations = 7,124)				
Euro × *Post*	0.17	0.18	0.12	0.11
	(0.111)	(0.109)	(0.086)	(0.085)
Euro	−0.32***	−0.23**		
	(0.113)	(0.110)		
Post	−0.19**	−0.19**		
	(0.093)	(0.092)		
Injured		−0.10		−0.23***
		(0.066)		(0.058)
Age		0.31**		
		(0.132)		
Age^2		−0.01**		
		(0.002)		
Homegame		0.14***		0.13***
		(0.018)		(0.018)
Medium selectchance (no. of observations = 2,067)				
Euro × *Post*	0.34*	0.33*	0.27**	0.27**
	(0.170)	(0.170)	(0.102)	(0.102)
Euro	0.39***	0.41**		
	(0.131)	(0.198)		
Post	−0.24**	−0.24**		
	(0.095)	(0.095)		
Injured		−0.15		−0.15
		(0.107)		(0.092)
Age		−0.21		
		(0.173)		
Age^2		0.004		
		(0.003)		
Homegame		0.20***		0.20***
		(0.034)		(0.031)
High selectchance (no. of observations = 2,125)				
Euro × *Post*	−0.30**	−0.31**	−0.39***	−0.39***
	(0.125)	(0.125)	(0.088)	(0.089)
Euro	0.34**	0.29*		
	(0.160)	(0.151)		
Post	0.06	0.08		
	(0.083)	(0.085)		
Injured		−0.20**		−0.32***
		(0.097)		(0.083)
Age		−0.19		
		(0.458)		
Age^2		0.003		
		(0.008)		
Homegame		0.12***		0.12***
		(0.028)		(0.027)
Player FE	No	No	Yes	Yes
Game day FE	No	No	Yes	Yes
Field position dummies	No	Yes	No	Yes
Club dummies	No	Yes	No	Yes
Opponent dummies	No	Yes	No	Yes

Notes. Linear regression results with robust standard errors clustered at the player level between parentheses. The subsamples low, medium, and high selectchance are based on tertiles of selectchance for players with at least one national team selection, with selectchance cutoffs 0.29 and 0.91.

*Significant at the 10% level; **significant at the 5% level; ***significant at the 1% level.

Table 5 reports regression results for each of the three selectchance subsamples with the performance index as the dependent variable. The first two columns report estimates of ordinary least squares (OLS) regressions without player and game day fixed effects, whereas the last two columns report the results of regressions that include those fixed effects.[40] Column (4) corresponds to our main regression specification in Equation (1). In all regressions, standard errors are robust and clustered at the individual player level to take into account serial correlation. The resulting estimator of the variance-covariance matrix is consistent as the number of players in our data is large (see Bertrand et al. 2004).

For players with low selectchance values, the treatment effect is not estimated significantly different from zero in any of the specifications. For players with medium selectchance values, the estimated treatment effect is positive and significant in all specifications. It is equal to 0.27 standard deviations in the full specification in column (4) that includes all fixed effects and covariates. For players with high selectchance values, the estimated treatment effect is negative and significant in all specifications and equals −0.39 standard deviations in the full specification.[41] The control variables have the expected signs. The effect of homegame is positive and highly significant in all regressions, and playing injured has negative effects.

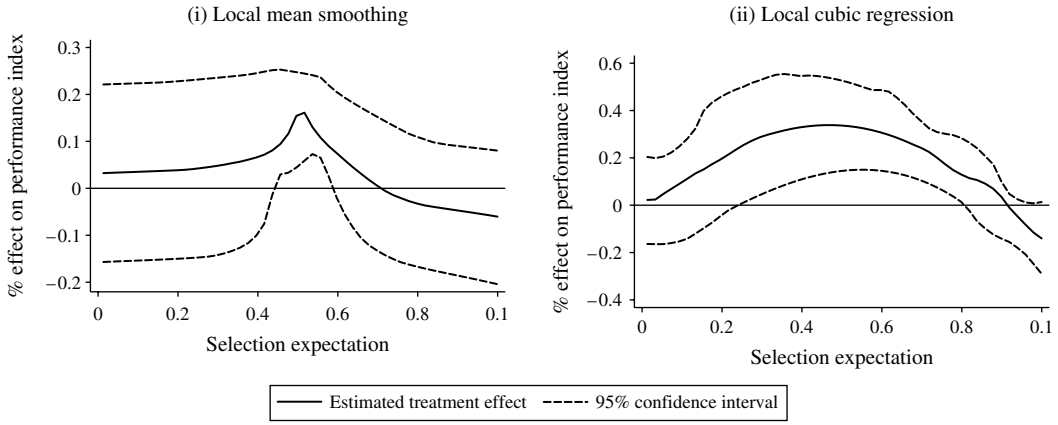
Inclusion of player and game day fixed effects somewhat decreases the estimated positive treatment effect for players with medium selectchance values, and amplifies the estimated negative treatment effect for players with high selectchance values. As will be discussed in more detail in §6.2, the estimates without player fixed effects may be biased upward, because for European players who participated in the qualification games for the Euro 2008 selection into the treatment group may not be completely random. Player fixed effects alleviate such concerns by controlling for (time-invariant) skill differences between players.

5.2.3. Nonlinear Interaction Between the Treatment and Selectchance. To investigate the relation between selectchance and the impact of the Euro Cup career prospect further and without imposing somewhat arbitrary cutoffs between groups of players with different selection chances, we estimate the following

[40] The specification in Equation (1) with player fixed effects relies on the strict exogeneity assumption, $E(\varepsilon_{it} \mid X_{i1}, \ldots, X_{iT}, \gamma_i) = 0$, that rules out correlation between the disturbance and explanatory variables for all t. We therefore also report pooled OLS estimates, which only require contemporaneous exogeneity.

[41] To obtain a more tangible picture of the magnitudes of the effects, we will analyze separate performance measures (rather than an index) in §5.3.

Figure 4 **Treatment Effects and Selectchance**



linear regression specification including interaction terms between the treatment indicator $euro_i \times post_{it}$ and a quadratic function of selectchance:

$$\begin{aligned} Y_{it} = {} & \delta_1 euro_i \times post_{it} + \delta_2 euro_i \times post_{it} \times selectchance_i \\ & + \delta_3 euro_i \times post_{it} \times selectchance_i^2 \\ & + \pi_1 post_{it} \times selectchance_i + \pi_2 post_{it} \\ & \times selectchance_i^2 + \gamma_i + \alpha_t + X_{it}'\beta + \varepsilon_{it}. \end{aligned} \quad (2)$$

The parameters of primary interest are δ_1, δ_2, and δ_3. In particular, the relation between selectchance and the strength of the treatment effect is qualitatively similar to the theoretical prediction in Figure 1 if $0 = \delta_1 < \delta_2 < -\delta_3$; under these conditions, the treatment effect reaches its maximum at selectchance equal to $-\delta_2/2\delta_3 \in (0, \frac{1}{2})$ and is positive if and only if selectchance lies below $-\delta_2/\delta_3 \in (0, 1]$.

As shown in the first column of Table A.3 in the appendix, the estimates of δ_2 and δ_3 have the expected signs and relative magnitudes and are both significant at the 1% level. The maximum treatment effect occurs at selectchance ≈ 0.45, and the selectchance threshold above which the treatment effect is negative equals 0.89. The latter is consistent with our earlier observation that all *euro* group players with selectchance greater than 0.9 who did not suffer an injury indeed played in Euro 2008.

5.2.4. Player-Specific Treatment Effects. A shortcoming of the regression approach with nonlinear selectchance interactions is that it imposes a specific functional form. We therefore use the following two-step approach to complement the previous analyses. First, we estimate player-specific treatment effects by running the following linear fixed effects regression using the full sample:

$$Y_{it} = \delta_{0i} euro_i \times post_{it} + \gamma_i + \alpha_t + X_{it}'\beta + \varepsilon_{it}. \quad (3)$$

Second, we nonparametrically estimate the relation between the estimated player-specific treatment effects (δ_{0i}) and players' selectchance values. This approach allows us to investigate the full relation between estimated treatment effects and selectchance without imposing any functional form assumption.

Figure 4 shows smoothed curves computed using local polynomial regression of the estimated player-specific treatment effects as a function of selectchance.[42] The dashed lines represent the smoothed player-specific 95% confidence interval bounds. Consistent with our regression results so far, we observe that the estimated individual treatment effects are close to zero and insignificant for players with low values of selectchance, positive for players with intermediate values of selectchance, and negative for players with high values of selectchance.[43] The results hence again confirm our prediction that the Euro Cup career prospect had a positive impact on the performances of players with intermediate chances of making their national team and a negative impact on the performances of players with very good chances of making their national team.

5.3. Different Dimensions of Performance

The results so far provide compelling evidence that the Euro 2008 career prospect affected the performances of players with intermediate or high chances of being selected for their national team, where performance was measured by an index comprised of

[42] More specifically, smoothing is achieved by local mean smoothing and local cubic regression with a rule of thumb bandwidth selection.

[43] Note that, unlike in the previous regressions based on specifications (1) and (2), treated players are no longer compared to control group players with similar values of selectchance here. Instead, all treated players are assigned the same control group consisting of all noneuro players. In spite of this difference and the added functional flexibility, the (qualitative and quantitative) insights remain very similar.

Table 6 Different Performance Measures as the Dependent Variable

	Passes received	Ball contacts	Shots on goal	Goals	Duels won	Grades	Starter	Minutes played	Index per minute
				Low selectchance (no. of observations = 7,124, last column: 5,946)					
Euro × Post	1.42	2.54	0.06	0.02	1.05*	0.05	0.08*	4.79	−0.04
	(1.183)	(2.293)	(0.105)	(0.015)	(0.558)	(0.099)	(0.045)	(3.611)	(0.045)
Midfield	−5.34***	−16.91***	0.24***	0.02	−2.09***	−0.46***	−0.22***	−19.79***	0.02
	(1.201)	(2.648)	(0.078)	(0.013)	(0.783)	(0.115)	(0.051)	(4.119)	(0.052)
Forward	−6.94***	−20.39***	0.45***	0.06**	−2.83***	−0.54***	−0.26***	−24.22***	0.09
	(1.992)	(3.757)	(0.152)	(0.025)	(0.968)	(0.178)	(0.078)	(6.083)	(0.083)
Injured	−2.75***	−4.98***	−0.26***	−0.03	−1.12***	−0.24***	−0.11***	−9.41***	0.04
	(0.732)	(1.404)	(0.075)	(0.017)	(0.377)	(0.078)	(0.029)	(2.097)	(0.051)
Homegame	1.74***	2.02***	0.20***	0.03***	0.24**	0.13***	−0.01*	−0.99*	0.18***
	(0.284)	(0.439)	(0.026)	(0.007)	(0.118)	(0.023)	(0.007)	(0.540)	(0.018)
				Medium selectchance (no. of observations = 2,067, last column: 1,835)					
Euro × Post	4.70***	7.04***	0.46***	−0.03*	0.83	0.31**	0.13**	8.91**	0.18***
	(1.339)	(2.162)	(0.110)	(0.019)	(0.508)	(0.126)	(0.052)	(4.034)	(0.054)
Midfield	−2.00	−10.87	0.36**	0.04	0.07	−0.01	−0.10	−7.44	0.07
	(3.398)	(6.688)	(0.158)	(0.024)	(1.076)	(0.245)	(0.084)	(8.279)	(0.087)
Forward	−4.87	−15.75**	0.39	0.06	−0.45	−0.03	−0.19*	−13.22	0.21
	(3.831)	(7.319)	(0.233)	(0.039)	(1.223)	(0.293)	(0.106)	(9.391)	(0.143)
Injured	−0.29	−3.31*	−0.14	−0.06*	−1.00**	−0.11	−0.08*	−5.48*	−0.04
	(1.161)	(1.830)	(0.165)	(0.033)	(0.454)	(0.119)	(0.048)	(3.080)	(0.083)
Homegame	2.08***	2.84***	0.29***	0.04***	0.63***	0.24***	0.003	1.60	0.16***
	(0.504)	(0.800)	(0.054)	(0.013)	(0.193)	(0.039)	(0.014)	(0.988)	(0.042)
				High selectchance (no. of observations = 2,125, last column: 2,016)					
Euro × Post	−5.87***	−10.17***	−0.24***	−0.04*	−2.03***	−0.39***	−0.14***	−11.07***	−0.09**
	(1.338)	(2.407)	(0.080)	(0.020)	(0.491)	(0.129)	(0.042)	(3.182)	(0.039)
Midfield	−4.31	−13.96***	0.40*	0.02	−0.61	−0.07	−0.06	−5.40	−0.10
	(2.733)	(4.769)	(0.223)	(0.030)	(1.042)	(0.151)	(0.046)	(3.557)	(0.109)
Forward	−9.06***	−23.52***	−0.08	0.16**	−1.61	−0.16	−0.13*	−9.09	−0.25
	(3.159)	(5.465)	(0.283)	(0.063)	(1.327)	(0.304)	(0.068)	(5.561)	(0.165)
Injured	−3.86***	−5.60***	−0.39**	−0.09**	−1.38**	−0.20**	−0.10***	−7.48***	−0.09*
	(1.106)	(1.816)	(0.155)	(0.032)	(0.544)	(0.093)	(0.032)	(2.726)	(0.049)
Homegame	1.75***	2.12**	0.26***	−0.003	−0.01	0.17***	0.01	−0.22	0.12***
	(0.565)	(0.787)	(0.053)	(0.014)	(0.225)	(0.035)	(0.011)	(0.752)	(0.021)

Notes. This table reports linear fixed effects regression estimates. All specifications include player, game day, club, and opponent fixed effects. Values between parentheses are robust standard errors clustered at the player level. The subsamples low, medium, and high selectchance are based on tertiles of selectchance for players with at least one national team selection, with selectchance cutoffs 0.29 and 0.91.

*Significant at the 10% level; **significant at the 5% level; ***significant at the 1% level.

passes received, ball contacts, shots on goal, goals, duels won, and grades assigned by sports magazines. In this section, we investigate the effects of the Euro 2008 career prospect on each of these measures individually and consider several additional outputs.

5.3.1. Productive Effort. Table 6 shows the results of the full regression specification in Equation (1) for each of the individual measures in the performance index as the dependent variable, where the three subsamples are based on selectchance as before. The results are largely consistent across performance measures. In the medium selectchance subsample, the estimated treatment effects are positive for all performance measures except for duels won (where the estimated coefficient is positive but insignificant) and goals.[44] In the high selectchance subsample, the estimated treatment effects are negative and significant (mostly at the 1% level) for all six performance measures.

[44] Contrary to our predictions, we obtain a significant negative effect for goals. Our results with four subsample based on selectchance quartiles, reported in Online Appendix B, suggest that this finding may be driven by a negative effect on the performances of player with medium to high selections chances: with four subsamples, we find a significant positive effect of the Euro 2008 career prospect on players in the second quartile and significant negative effects in the third and fourth quartiles. It should also be noted, however, that goals is noisier than the other available performance measures.

Table 7 Magnitudes of Estimated Effects

	Passes received (%)	Ball contacts (%)	Shots on goal (%)	Goals (%)	Duels won (%)	Grades (%)	Starter (%)	Minutes played (%)
Medium selectchance	19.3	15.8	31.8	−18.0	9.0	13.6	15.0	12.0
High selectchance	−21.2	−19.0	−14.6	−23.3	−18.2	−15.7	−15.7	−13.6

Note. This table reports effects in percentages of euro players' pretreatment means in the respective subsamples, based on the regression results in Table 6.

The last three columns of Table 6 report results for three additional output measures: starter (i.e., whether the player was on the field at the start of the game), minutes played, and performance per minute. For starter and minutes played, we again find significant positive effects in the medium selectchance sample and significant negative effects in the high selectchance sample. To ensure that differences in minutes played are not the sole driver of our findings, we also run our main regression specification with the performance index divided by the number of minutes played as the dependent variable (including only observations with minutes played > 0). As shown in the final column of Table 6, our findings are robust: the estimated treatment effect is again positive in the medium selectchance sample and negative in the high selectchance sample.

Table 7 provides an overview of the estimated magnitudes of effects based on these regressions. The estimated effects are economically significant, ranging between 10% and 20% for most output measures. The effects are also remarkably similar across performance measures, including the grades that players receive from sports magazines.

Estimation of a quadratic relation between the effect of the Euro 2008 career prospect and selectchance, as specified in Equation (2), also yields consistent results, summarized in Table 8. For all output measures, the estimates of δ_2 and δ_3 have the expected signs and relative magnitudes and are both significant. For the majority of output measures, the maximum treatment effect occurs for players with selectchance values around 0.45 and the selectchance threshold above which the treatment effect is negative is about 0.9. The only measure for which the thresholds are significantly lower is duels won (0.39 and 0.77). A potential explanation could be that negative effects are more pronounced for duels because they carry a high risk of injury.

These results confirm that, across a wide range of performance measures, the Euro Cup career prospect had statistically and economically significant positive effects on the performances of players with intermediate chances of getting selected into their national team and statistically and economically significant

Table 8 Overview of Estimated Quadratic Performance-Selectchance Relation

	Performance index	Started game	Minutes played	Index per minute
Euro × *Post* (δ_1)	+	+	+	−
Euro × *Post* × *Selectchance* (δ_2)	+***	+**	+**	+***
Euro × *Post* × *Selectchance*^{2} (δ_3)	−***	−***	−***	−***
δ_2 and δ_3 jointly significant?	Yes***	Yes**	Yes**	Yes***
$\delta_2 < -\delta_3$	Yes**	Yes*	Yes*	Yes
Max effect at selectchance	0.45***	0.45***	0.44***	0.48***
Zero effect at selectchance	0.89***	0.90***	0.88***	0.96***

	Passes received	Ball contacts	Shots on goal	Goals	Duels won	Grades
Euro × *Post* (δ_1)	−	−	+	−	+	−
Euro × *Post* × *Selectchance* (δ_2)	+***	+***	+***	+**	+*	+***
Euro × *Post* × *Selectchance*^{2} (δ_3)	−***	−***	−***	−**	−**	−***
δ_2 and δ_3 jointly significant?	Yes***	Yes***	Yes***	Yes**	Yes***	Yes***
$\delta_2 < -\delta_3$	Yes**	Yes**	Yes	Yes	Yes***	Yes*
Max effect at selectchance	0.45***	0.44***	0.47***	0.46***	0.39***	0.46***
Zero effect at selectchance	0.90***	0.88 ***	0.94***	0.92***	0.77***	0.92***

Notes. This table is based on the regression results in Tables A.3 and A.4 in the appendix. The first three rows report sign and significance of the estimated coefficients of *euro* × *post* (δ_1), *euro* × *post* × *selectchance* (δ_2), and *euro* × *post* × *selectchance*^{2} (δ_3). The fourth and fifth rows report the outcomes of Wald tests that $\delta_2 = \delta_3 = 0$ and $\delta_2 < -\delta_3$. The last two rows report the values of selectchance at which the treatment effect is maximal ($selectchance = -\delta_2/2\delta_3$) and zero ($selectchance = -\delta_2/\delta_3$), as implied by these estimates. Their significance levels are computed using the delta method.

*Significant at the 10% level; **significant at the 5% level; ***significant at the 1% level.

negative impact on the performances of players with very good national team selection chances.

5.3.2. Destructive Effort. In soccer, there are two types of effort: productive effort to improve one's own performance and "destructive effort" aimed at sabotaging players on the opponent team. Stronger (weaker) incentives to win games may increase (decrease) both types of effort (see Lazear 1989). To test whether the Euro 2008 career prospect affected destructive effort, we replicate our previous empirical analyses using fouls and yellow/red cards as dependent variables. Fouls are unfair acts such as kicking or tripping an opponent or using excessive force when tackling an opponent. More serious and/or persistent offenses lead to a yellow or red card being shown by the referee.[45]

Table 9 reports the results of regressions for the three selectchance subsamples. We find no evidence that the Euro 2008 career prospect had an effect on how many cards a player receives. For fouls committed and fouls suffered, we find significant negative treatment effects in the high selectchance sample.[46] However, we find no significant effects on fouls committed or suffered by players in the medium selectchance sample, and unexpected positive effects for players in the low selectchance sample.[47] With quadratic interactions between the Euro 2008 career prospect and selectchance, none of the regressors of interest are significant for fouls committed or suffered (see Table A.5 in the appendix). In summary, we find some evidence that the Euro 2008 career prospect had negative effects on fouls for players with high selection chances, but no consistent pattern of results to conclude that players with intermediate chances increased their destructive effort.

As mentioned earlier, related work by Garicano and Palacios-Huerta (2014) finds strong evidence that greater rewards to winning games increases destructive effort in soccer. Our analysis, on the other hand, shows no similar positive effect of the Euro 2008 career prospect. Two explanations come to mind.

Table 9 Destructive Performance Measures as Dependent Variable

	Yellow/red card	Fouls committed	Fouls suffered
Low selectchance (no. of observations = 7,124)			
Euro × Post	0.02	0.20**	0.18*
	(0.016)	(0.091)	(0.105)
Midfield	−0.01	−0.08	−0.13
	(0.023)	(0.142)	(0.164)
Forward	−0.05*	−0.19	−0.12
	(0.031)	(0.169)	(0.219)
Injured	−0.04*	−0.12	−0.04
	(0.021)	(0.081)	(0.091)
Homegame	−0.02***	−0.10***	−0.04**
	(0.007)	(0.027)	(0.029)
Medium selectchance (no. of observations = 2,067)			
Euro × Post	0.02	−0.10	0.09
	(0.091)	(0.105)	(0.104)
Midfield	0.03	0.10	0.23
	(0.025)	(0.204)	(0.170)
Forward	−0.04	−0.02	0.18
	(0.034)	(0.273)	(0.198)
Injured	0.002	−0.11	−0.02
	(0.036)	(0.146)	(0.130)
Homegame	−0.04***	−0.14**	0.12*
	(0.015)	(0.056)	(0.061)
High selectchance (no. of observations = 2,125)			
Euro × Post	−0.01	−0.30***	−0.30***
	(0.026)	(0.102)	(0.089)
Midfield	0.05	0.36	0.21
	(0.061)	(0.218)	(0.137)
Forward	0.04	0.28	0.30
	(0.079)	(0.285)	(0.266)
Injured	0.01	0.14	−0.21
	(0.031)	(0.111)	(0.134)
Homegame	−0.05***	−0.23***	0.07
	(0.017)	(0.062)	(0.072)

Notes. This table reports linear fixed effects regression estimates. All specifications include player, game day, club, and opponent fixed effects. Values between parentheses are robust standard errors clustered at the player level. The subsamples low, medium, and high selectchance are based on tertiles of selectchance for players with at least one national team selection, with selectchance cutoffs 0.29 and 0.91.

*Significant at the 10% level; **significant at the 5% level; ***significant at the 1% level.

First, the Euro 2008 career prospect may not generate equally strong incentives to win club games as the rule change they consider, because national team coaches do not *directly* reward club team victories but make decisions based on their perceptions of individual abilities. Second, most of the players on the opposing team in a club match are typically not competitors for spots on the same national team, which implies that often destructive effort in a club game does not sabotage a rival in the national team selection contest.

[45] A yellow card indicates that a player has been officially cautioned; a second caution in the same game leads to the player being sent off the field (with no substitute coming in to replace him). Red cards are reserved for the most serious offenses and lead to immediate dismissal. Since red cars are rare, we do not consider them as a separate output measure but instead pool them together with yellow cards.

[46] It should be noted that, unlike fouls committed, fouls suffered can be viewed as a measure of offensive performance, the idea being that stronger players are harder to stop for the opponent and may therefore suffer more fouls.

[47] In regressions with four subsamples based on selectchance quartiles, only the negative effect in the highest quartile remains significant for fouls suffered.

Table 10 Injuries

	Low selectchance	Medium selectchance	High selectchance
Euro × *Post*	0.001	0.006**	−0.002
	(0.002)	(0.003)	(0.002)
No. of observations	97,020	25,740	25,740

Notes. This table reports linear fixed effects regression estimates. All specifications include player and calendar week fixed effects. Values between parentheses are robust standard errors clustered at the player level. The subsamples low, medium, and high selectchance are based on tertiles of selectchance for players with at least one national team selection, with selectchance cutoffs 0.29 and 0.91.

**Significant at the 5% level.

5.3.3. Injuries. Greater effort in soccer is usually associated with an increased probability of injury, especially as effort often goes hand in hand with taking more risks. One would therefore expect the Euro 2008 career prospect to have a positive effect on the incidence of injuries for players with intermediate national team selection chances. Conversely, one would expect a negative effect for players with high selection chances, who want to avoid fatigue and should shy away from actions that carry high injury risks.

To test directly whether the Euro 2008 career prospect affected the incidence of injuries, we define the variable "newinjury" that is equal to 1 on calendar day t if the data report player i as fit on calendar day $t-1$ but as injured on calendar day t.[48] For each selectchance subsample, we then estimate the following regression equation:

$$newinjury_{it} = \delta_0 euro_i \times post_{it} + \gamma_i + week_t + \varepsilon_{it},$$

where t is calendar day (rather than game day as in the previous analyses), $post \times euro$ indicates the Euro 2008 career prospect treatment, γ_i are player fixed effects, and week_t are time fixed effects at the week level.

Table 10 reports the key results. We find a significant positive effect on the number of injuries suffered by players with intermediate selection chances, which is consistent with them exerting higher effort and taking greater risks to make it into the Euro 2008. For players with high selection chances, the estimated effect is large and negative (−20%), as expected, although it fails to be statistically significant.

[48] The data on injuries were provided by comunio.de, the largest German fantasy soccer platform (620,000 users in 2013). The website publishes the injury status of each player once a day in the morning.

6. Discussion and Robustness Checks

6.1. Control and Treatment Group Assignment

There are three types of players in our sample: (i) Europeans whose teams qualified for the Euro 2008, (ii) Europeans whose teams did not qualify for the Euro 2008, and (iii) non-Europeans for whom it was clear that their team would not participate in the Euro 2008 from the start. So far the control group included all players of type (ii) and (iii), i.e., all players whose national teams did not participate in the Euro 2008, and the treatment group included all players of type (i).

This gives rise to two potential concerns. First, one may be concerned that Europeans who participated in the qualification games for the Euro 2008 may have influenced their (treatment versus control) group assignment. Although a nation's participation in the Euro Cup qualification games is exogenous, and nationality is an exogenous characteristic of each player,[49] a nation's qualification for the Euro 2008 should depend on the skills of the players who played in the qualification matches. For some European players, selection into the treatment group may thus not be completely random at this stage. Second, results could be driven by a "double treatment effect" whereby Europeans whose teams failed to qualify were discouraged after the qualification decisions, because they now faced worse future career prospects than they may have expected before.

As a first robustness check, we therefore run regressions using only non-Europeans as the control group (and Europeans of type (i) as the treatment group, as before). This ensures that all players in the control group were ineligible to play in the Euro 2008 for an exogenous reason. The regressions continue to include player fixed effects to control for (time-invariant) skill differences between players, which should further alleviate potential bias.

Results are consistent with our earlier findings using the full sample: the estimated treatment effect remains positive for players with medium selectchance values and negative (and of nearly identical magnitude as before) for players with high selectchance values (see the first column of Table 11). Similarly, the findings of regressions with quadratic interactions between the treatment and selectchance are consistent with our earlier results (see Table A.6 in the appendix). These results give us confidence that our earlier findings were not driven solely by potential effects on Europeans whose teams failed to qualify.

[49] Although not entirely impossible, players very rarely switch nationalities to be able to play for a different national team, partly because the FIFA has a critical attitude toward such steps.

Table 11 Robustness Checks

	Dependent Variable: Performance index					
	Non-EU control group	Discourage effect	Contract expirations	Placebo treatment	Minutes played > 0	Tobit MLE
			Low selectchance			
Euro × *Post*	0.07	−0.22***	0.20**	0.07	0.08	0.15
	(0.085)	(0.081)	(0.087)	(0.116)	(0.066)	(0.115)
Injured	−0.24***	−0.15	−0.22***	−0.32***	−0.12**	−0.23*
	(0.059)	(0.115)	(0.066)	(0.076)	(0.053)	(0.068)
Homegame	0.13***	0.17***	0.15***	0.13***	0.16***	0.12***
	(0.019)	(0.038)	(0.020)	(0.025)	(0.018)	(0.021)
No. of observations	6,905	1,570	5,777	3,541	5,946	7,124
			Medium selectchance			
Euro × *Post*	0.26*	−0.18	0.25**	−0.06	0.18**	0.40**
	(0.143)	(0.146)	(0.120)	(0.125)	(0.086)	(0.175)
Injured	−0.22*	−0.11	−0.18*	−0.15	−0.15**	−0.20*
	(0.112)	(0.136)	(0.098)	(0.138)	(0.070)	(0.108)
Homegame	0.19***	0.20***	0.20***	0.15***	0.20***	0.21***
	(0.035)	(0.040)	(0.032)	(0.044)	(0.033)	(0.211)
No. of observations	1,549	1,346	1,785	1,050	1,835	2,067
			High selectchance			
Euro × *Post*	−0.33***	0.17	−0.29***	0.15	−0.27***	−0.38***
	(0.106)	(0.117)	(0.081)	(0.097)	(0.050)	(0.126)
Injured	−0.31***	−0.32***	−0.35***	−0.22***	−0.31***	−0.30***
	(0.110)	(0.104)	(0.095)	(0.077)	(0.086)	(0.087)
Homegame	0.12***	0.12***	0.12***	0.09*	0.15***	0.12***
	(0.030)	(0.027)	(0.030)	(0.046)	(0.025)	(0.027)
No. of observations	1,730	904	1,864	1,068	2,016	2,125

Notes. This table reports estimated coefficients for linear regression and marginal effects on the censored dependent variable for Tobit maximum likelihood estimation (MLE). Values between parentheses are robust standard errors clustered at the player level. All specifications include player, game day, field position, own club, and opponent club fixed effects. The subsamples low, medium, and high are drawn based on tertiles of selectchance for players with at least one national team selection, with selectchance cutoffs 0.29 and 0.91.

*Significant at the 10% level; **significant at the 5% level; ***significant at the 1% level.

We also test directly for the presence of a discouragement effect on European players whose teams failed to qualify for the Euro 2008. The second column in Table 11 present the findings of regressions in which the treatment group consist of Europeans whose teams did not qualify (group (ii) above) and the control group of non-Europeans (group (iii) above). The results are mixed. In our main regression specification, we do find a significant negative effect for players with low selectchance values, but no significant effects for players in the medium and high selectchance samples.[50] In the specification with quadratic interactions between the treatment and selectchance, none of the coefficients of interest are significant (see Table A.6 in the appendix). Overall, we thus find only weak evidence of a discouragement effect.

6.2. Employment contracts

A key institutional feature that our empirical analyses exploit is that European and non-European players work for the same clubs. It is therefore natural to expect that treatment and control players face similar incentives aside from national team opportunities, and that (conditional on covariates) the performances of players in the two groups would have evolved similarly over time in the absence of the Euro Cup treatment, the key identification assumption underlying our empirical analyses.

Ideally, however, our regressions would also control for the terms of players' contracts including salaries, given that contracts (and market "structure" more broadly) vary from player to player.[51] Unfortunately, we were unable to obtain detailed data on contract terms, with the exception of expiration dates, which we collected from the magazine *Kicker*.

[50] In regressions with four subsample based on selectchance quartiles, we find a significant negative effect for the second quartile.

[51] Recent theoretical work by Bonatti and Hörner (2013) explores the interplay between career concerns and market structure (in the form of wage-setting arrangements) in a dynamic context.

Clubs typically employ players under multiyear contracts. At contract expiration, which almost always occurs at the end of a season,[52] players negotiate with their own and other clubs. This may lead to a potential concern for our empirical analyses if players for whom we estimate a positive treatment effect are more likely to have their contracts expire in summer 2008 than other players, and an upcoming contract expiration creates positive incentive effects. Indeed, Stiroh (2007) finds that the performances of professional basketball players in the NBA improve in the year prior to contract expiration.[53]

The third column in Table 11 reports regression results based on a sample excluding the 43 players whose contracts expired at the time of the Euro 2008. The findings are consistent with our main results, suggesting that incentives due to upcoming contract expirations did not confound our results.

One would also expect that, for some Europeans players, contract expiration dates and other unobserved contract characteristics (such as bonuses) may have been determined anticipating the incentive effects of the Euro 2008. Indeed, there is a significant negative correlation (equal to -0.28) between the Euro 2008 career prospect treatment and contract expiration in summer 2008 in the high selectchance subsample.[54] A potential explanation could be that the contract expiration dates for some top players were negotiated with the aim of lowering the reward from a Euro Cup participation and hence the adverse effect of the Euro Cup career prospect. As discussed, a strong performance in the Euro Cup often allows players to obtain higher-paid jobs after the tournament. Arguably, this reward to a Euro Cup participation is stronger for players whose current contract expires right after the Euro Cup than for others. By postponing contract expirations to a later date, managers may hence attempt to reduce the adverse incentive effect of an upcoming Euro Cup for players with very good chances.

6.3. Placebo Treatment

A common concern with difference-in-differences estimation is that the estimated treatment effects might be spurious. To exclude this possibility, we run our main specification using data from earlier seasons (2005/2006 and 2006/2007) and setting a hypothetical start of the treatment period in November 2006, one year before the actual qualification decisions for the Euro 2008. The fourth column in Table 11 reports the results of these regressions. The estimated treatment effects are insignificant in all three selectchance subsamples, suggesting that our results are not spurious.[55]

6.4. Left-Censoring at Zero Minutes Played

Our empirical analyses so far ignored that our data are left-censored at zero. Soccer clubs employ between 20 and 30 players, but only a maximum of 14 players (11 starters and up to three substitutes) are on the field in any given game. Unless injured or otherwise unavailable, the remaining players spend the game on the reserve bench, which implies an observation of zero for all our performance measures. This is the case for 14% of observations in our full sample.

To investigate the impact of censoring on our findings, we first estimate our main specification excluding all observations associated with zero minutes played (minutes played > 0). The results, reported in the fifth column of Table 11, are consistent with our earlier findings, albeit the estimated treatment effects are smaller.

Second, we explicitly consider censored observations as corner solutions. Observed performance is still assumed to be linear in parameters, $Y^*_{it} = \delta_0 post_{it} \times euro_i + \gamma_i + \alpha_t + X'_{it}\beta + \varepsilon_{it}$, but for estimation the dependent variable is now defined as $Y = \max[0, Y^*]$. The last column in Table 11 reports the findings of type 1 Tobit maximum likelihood estimation using this approach. Again, we find a significant positive treatment effect for players with intermediate values of selectchance and a significant negative treatment effect for players with high selectchance values, and the magnitudes of the estimated effects are similar to our earlier results.

7. Conclusion

This paper provides direct evidence that future career prospects create implicit incentives. Using data from professional soccer, we find that the career prospect of being selected to participate in an important upcoming cup has economically important positive effects on the performances of players with intermediate selection chances, but economically important negative effects on the performances of players with high selection chances.

For players with intermediate chances of making their national team, our findings hence confirm that "…the increased rivalry benefits clubs, because players exert even higher effort in their clubs to get into

[52] In our data set, all contract expirations occurred between seasons.

[53] In related recent work, Buraimo et al. (2015) find that Bundesliga players with longer contracts tend to perform better and explain this result by a player selection effect.

[54] The corresponding correlations are insignificant in the low and medium selectchance samples.

[55] Consistent with this, we also find no significant treatment effects when dividing the players in four subsamples based on pastselect quartiles (see Online Appendix B).

the national team," as stated by Oliver Bierhoff, general manager of the German national team.[56] However, our findings also suggest that an upcoming cup is to the detriment of clubs that employ regular players of qualified national teams, because players who are already quite certain of being selected reduce their effort prior to the cup to avoid fatigue and injuries. One can only speculate that statements such as "We want to ignite rivalry, and we want it for every position," by the German national team coach Joachim Löw are meant to reassure clubs in this respect.[57]

Our findings have implications for the incentive effects of external career opportunities and promotion prospects in firms. Employees have incentives to increase or reduce effort for similar reasons as the professional soccer players in our data. Our empirical results suggest that effort incentives due to the promotion prospects will be strong for employees who believe that they have intermediate chances of getting promoted. Employees with very good chances of being promoted in the near future, on the other hand, may actually reduce their effort relative to a situation without any promotion prospect in order to avoid fatigue and thereby perform better once promoted.

Supplemental Material

Supplemental material to this paper is available at http://dx.doi.org/10.1287/mnsc.2015.2211.

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[56] The original quote in German is "…der größer werdende Konkurrenzkampf bereichert auch die Vereine, weil die Spieler sich in ihren Klubs noch mehr anstrengen, um in die Nationalmannschaft zu kommen" (Handelsblatt, September 4, 2009; http://www.handelsblatt.com/magazin/fussball/bierhoff-contra-allofs;2453190, accessed December 5, 2014).

[57] The original quote in German is "Wir wollen den Konkurrenzkampf entfachen, wir wollen ihn auf jeder Position haben." (stern.de, November 8, 2004; http://www.stern.de/sport/fussball/nationalmannschaft-klinsmann-haelt-druck-fuer-torhueter-aufrecht-532041.html, accessed December 5, 2014).

Appendix

Table A.1 Selectchance and Actual Euro 2008 Selections of Euro Group Players

Player	Nationality	Selectchance	Selected
Hamit Altintop	Turkey	1	1
Sotirios Kyrgiakos	Greece	1	1
Joris Mathijsen	Netherlands	0.998	1
Josip Simunic	Croatia	0.998	1
Tomas Galasek	Czech Republic	0.997	1
Theofanis Gekas	Greece	0.997	1
Marcell Jansen	Germany	0.996	1
Ioannis Amanatidis	Greece	0.995	1
Jacek Krzynowek	Poland	0.995	1
Rafael van der Vaart	Netherlands	0.994	1
Bastian Schweinsteiger	Germany	0.994	1
Per Mertesacker	Germany	0.994	1
Thomas Hitzlsperger	Germany	0.993	1
Torsten Frings	Germany	0.992	1
Fernando Meira	Portugal	0.992	1
Arne Friedrich	Germany	0.989	1
Kevin Kuranyi	Germany	0.988	1
Lukas Podolski	Germany	0.977	1
Bernd Schneider	Germany	0.973	0
Philipp Lahm	Germany	0.973	1
Ivica Olic	Croatia	0.971	1
David Jarolim	Czech Republic	0.963	1
Piotr Trochowski	Germany	0.914	1
Clemens Fritz	Germany	0.875	1
Miroslav Klose	Germany	0.857	1
Markus Rosenberg	Sweden	0.845	1
Willy Sagnol	France	0.828	1
Halil Altintop	Turkey	0.808	0
Ivan Saenko	Russia	0.732	1
Mario Gomez	Germany	0.729	1
Simon Rolfes	Germany	0.729	1
Nigel de Jong	Netherlands	0.701	1
Roberto Hilbert	Germany	0.534	0
Tim Borowski	Germany	0.333	1
Gonzalo Castro	Germany	0.327	0
Manuel Friedrich	Germany	0.294	0
Ivan Klasnic	Croatia	0.237	1
Hugo Almeida	Portugal	0.201	1
Yildiray Basturk	Turkey	0.162	0
Jiri Stajner	Czech Republic	0.150	0
Jan Schlaudraff	Germany	0.120	0
Patrick Owomoyela	Germany	0.161	0
Jurica Vranjes	Croatia	0.107	0
Mike Hanke	Germany	0.104	0
Christian Pander	Germany	0.069	0
Alexander Madlung	Germany	0.046	0
Sebastian Kehl	Germany	0.042	0
Gerald Asamoah	Germany	0.041	0
Paul Freier	Germany	0.036	0
Stefan Kiessling	Germany	0.036	0
Mark van Bommel	Netherlands	0.036	0
Sergiu Radu	Romania	0.030	0
Vlad Munteanu	Romania	0.030	0
Malik Fathi	Germany	0.022	0
Patrick Owomoyela	Germany	0.018	0
Fabian Ernst	Germany	0.016	0
Christian Worns	Germany	0.016	0
Heiko Westermann	Germany	0	1
…	…	0	0

Table A.2 Summary Statistics: Subsamples Stratified By Selectchance

	Prequalification				Postqualification			
	Euro		Noneuro		Euro		Noneuro	
	Mean	Std. dev.	Mean	Std. dev.	Mean	Std. dev.	Mean	Std. dev.
Low selectchance ($N = 7{,}124$, 113 *euro* and 34 *noneuro* players)								
Age	26.74	4.27	28.53	3.61				
Selectchance	0.03	0.04	0.04	0.05				
Defense (*dummy*)	0.36	0.48	0.44	0.50	0.39	0.49	0.42	0.50
Midfield (*dummy*)	0.48	0.50	0.35	0.48	0.48	0.50	0.39	0.49
Forward (*dummy*)	0.15	0.36	0.21	0.41	0.13	0.33	0.19	0.39
Game starter	0.67	0.47	0.76	0.43	0.64	0.48	0.64	0.48
Minutes played	60.03	37.33	67.98	33.28	58.08	38.48	59.72	37.29
Performance index	−0.17	0.96	0.14	0.97	−0.21	1.00	−0.07	1.05
Passes received	17.45	14.11	21.11	14.77	17.65	14.98	19.80	16.33
Ball contacts	36.44	25.84	44.38	27.15	36.24	26.97	40.79	30.24
Shots on goal	0.88	1.25	1.16	1.42	0.78	1.18	0.96	1.33
Goals	0.07	0.28	0.10	0.34	0.08	0.28	0.08	0.30
Duels won	8.15	6.36	9.96	6.08	7.98	6.36	8.36	6.38
Journalist grade	1.72	1.21	2.01	1.17	1.63	1.23	1.77	1.28
Yellow/red card	0.13	0.34	0.15	0.36	0.12	0.33	0.12	0.32
Fouls committed	1.17	1.38	1.50	1.52	1.09	1.34	1.16	1.32
Fouls suffered	1.08	1.41	1.39	1.51	1.07	1.41	1.12	1.41
Medium selectchance ($N = 2{,}067$, 13 *euro* and 26 *noneuro* players)								
Age	25.68	2.90	28.51	3.45				
Selectchance	0.71	0.19	0.65	0.21				
Defense (*dummy*)	0.22	0.41	0.31	0.46	0.18	0.39	0.29	0.45
Midfield (*dummy*)	0.41	0.49	0.41	0.49	0.53	0.50	0.47	0.50
Forward (*dummy*)	0.38	0.49	0.28	0.45	0.29	0.46	0.24	0.43
Game starter	0.83	0.37	0.69	0.47	0.85	0.35	0.56	0.50
Minutes played	74.49	27.25	61.52	35.56	74.68	25.70	52.63	38.21
Performance index	0.32	0.90	−0.05	1.00	0.43	0.91	−0.28	1.03
Passes received	24.33	13.66	19.54	14.51	27.66	15.23	17.80	15.54
Ball contacts	44.41	23.38	37.90	25.97	47.62	24.88	33.66	27.31
Shots on goal	1.45	1.58	1.10	1.37	1.63	1.56	0.88	1.32
Goals	0.19	0.47	0.10	0.33	0.19	0.48	0.06	0.28
Duels won	9.29	5.04	8.30	6.16	9.03	4.71	7.35	6.13
Journalist grade	2.29	1.07	1.85	1.22	2.32	1.07	1.46	1.23
Yellow/red card	0.13	0.33	0.13	0.34	0.13	0.33	0.10	0.30
Fouls committed	1.31	1.37	1.32	1.43	1.16	1.20	1.15	1.37
Fouls suffered	1.40	1.44	1.10	1.35	1.27	1.26	1.01	1.29
High selectchance ($N = 2{,}125$, 22 *euro* and 17 *noneuro* players)								
Age	27.84	3.54	29.55	2.79				
Selectchance	0.99	0.01	0.98	0.02				
Defense (*dummy*)	0.34	0.47	0.44	0.50	0.36	0.48	0.47	0.50
Midfield (*dummy*)	0.44	0.50	0.44	0.50	0.40	0.49	0.46	0.50
Forward (*dummy*)	0.22	0.42	0.12	0.33	0.23	0.42	0.07	0.25
Game starter	0.91	0.28	0.84	0.37	0.83	0.38	0.86	0.35
Minutes played	81.34	21.24	74.01	30.36	74.05	29.09	76.14	28.82
Performance index	0.58	0.84	0.22	1.01	0.32	0.96	0.26	0.93
Passes received	27.65	14.63	22.93	15.73	24.29	15.22	24.13	15.92
Ball contacts	53.67	23.54	45.92	24.04	47.95	25.04	49.35	23.80
Shots on goal	1.64	1.78	1.13	1.51	1.47	1.79	0.99	1.37
Goals	0.17	0.43	0.14	0.38	0.144	0.43	0.12	0.35
Duels won	11.14	5.25	9.88	5.69	9.48	5.44	9.89	5.16
Journalist grade	2.51	0.97	2.15	1.12	2.23	1.18	2.25	1.05
Yellow/red card	0.16	0.37	0.12	0.33	0.16	0.37	0.14	0.35
Fouls committed	1.43	1.45	1.16	1.20	1.22	1.33	1.29	1.36
Fouls suffered	1.58	1.66	1.68	1.84	1.19	1.31	1.55	1.66

Notes. The subsamples low, medium, and high are drawn based on tertiles of selectchance for players with at least one national team selection, with selectchance cutoffs 0.29 and 0.91. Prequalification designates the time period prior to the official Euro 2008 qualification date. Player age is measured on May 17, 2008, the last game day preceding the Euro 2008.

Table A.3 Quadratic Interactions: Performance Index and Playing Time

	Linear FE: Selectchance interactions			
	Performance index	Starter	Minutes played	Index per minute
Euro × *Post*	0.01	0.02	1.57	−0.04
	(0.089)	(0.044)	(3.538)	(0.047)
× *Selectchance*	3.12***	1.14**	80.38**	1.68***
	(0.927)	(0.447)	(34.511)	(0.477)
× *Selectchance*^{2}	−3.48***	−1.26***	−91.30***	−1.76***
	(0.933)	(0.459)	(35.050)	(0.489)
Post				
× *Selectchance*	−1.65**	−0.75**	−55.37*	−0.79**
	(0.682)	(0.375)	(28.399)	(0.366)
× *Selectchance*^{2}	1.86***	0.83**	62.93**	0.85**
	(0.687)	(0.385)	(28.810)	(0.370)
Midfield	−0.25***	−0.19***	−16.07***	0.03
	(0.087)	(0.042)	(3.512)	(0.042)
Forward	−0.33***	−0.24***	−21.19***	0.08
	(0.120)	(0.061)	(4.778)	(0.064)
Injured	−0.22***	−0.10***	−7.69***	−0.01
	(0.043)	(0.021)	(1.515)	(0.034)
Homegame	0.14***	−0.007	−0.46	0.17***
	(0.014)	(0.006)	(0.417)	(0.014)
No. of observations	11,316	11,316	11,316	9,797

Notes. This table reports linear fixed effects regression estimates. All specifications include player, game day, own club, and opponent club fixed effects. Values between parentheses are robust standard errors clustered at the player level.

*Significant at the 10% level; **significant at the 5% level; ***significant at the 1% level.

Table A.4 Quadratic Interactions: Separate Performance Measures

	Linear FE: Selectchance interactions					
$N = 11{,}316$	Passes received	Ball contacts	Shots on goal	Goals	Duels won	Grades
Euro × *Post*	−0.35	−0.09	0.02	−0.002	0.57	−0.04
	(1.261)	(2.361)	(0.103)	(0.018)	(0.566)	(0.103)
× *Selectchance*	44.87***	68.85***	3.29***	0.51**	8.23*	3.45***
	(12.566)	(21.951)	(1.107)	(0.250)	(4.558)	(1.040)
× *Selectchance*^{2}	−49.99***	−77.93***	−3.49***	−0.56**	−10.67**	−3.77***
	(12.834)	(22.409)	(1.122)	(0.246)	(5.567)	(1.057)
Post						
× *Selectchance*	−22.38**	−38.98**	−1.16*	−0.26**	−3.95	−2.43***
	(9.354)	(16.636)	(0.691)	(0.120)	(3.540)	(0.778)
× *Selectchance*^{2}	25.44***	44.47***	1.32*	0.27**	5.18	2.64***
	(9.489)	(16.969)	(0.672)	(0.119)	(4.521)	(0.803)
Midfield	−4.46***	−15.25***	0.07***	0.03**	−1.57**	−0.33***
	(1.099)	(2.407)	(0.065)	(0.011)	(0.652)	(0.100)
Forward	−7.01***	−20.13***	0.37***	0.08***	−2.36***	−0.41***
	(1.615)	(3.131)	(0.118)	(0.021)	(0.763)	(0.144)
Injured	−2.42***	−4.70***	−0.25***	−0.04***	−1.09***	−0.18***
	(0.564)	(1.010)	(0.065)	(0.014)	(0.269)	(0.054)
Homegame	1.76***	2.10***	0.22***	0.02***	0.26***	0.16***
	(0.230)	(0.356)	(0.021)	(0.006)	(0.095)	(0.018)

Notes. This table reports linear fixed effects regression estimates. All specifications include player, game day, own club, and opponent club fixed effects. Values between parentheses are robust standard errors clustered at the player level.

*Significant at the 10% level; **significant at the 5% level; ***significant at the 1% level.

Table A.5 Quadratic Interactions: Destructive Measures

	Linear FE: Selectchance interactions		
$N = 11{,}316$	Yellow/red card	Fouls committed	Fouls suffered
Euro × *Post*	0.02	0.16	0.16
	(0.019)	(0.100)	(0.105)
× *Selectchance*	0.26	0.03	0.63
	(0.163)	(0.934)	(0.925)
× *Selectchance*^{2}	−0.30*	−0.43	−1.04
	(0.167)	(0.982)	(0.928)
Post			
× *Selectchance*	−0.18*	−0.09	0.10
	(0.092)	(0.751)	(0.691)
× *Selectchance*^{2}	0.21**	0.38	−0.02
	(0.099)	(0.773)	(0.686)
Midfield	−0.001	0.004	−0.07
	(0.017)	(0.111)	(0.137)
Forward	−0.04*	−0.08	−0.10
	(0.023)	(0.135)	(0.164)
Injured	−0.01	−0.05	−0.08
	(0.017)	(0.060)	(0.064)
Homegame	−0.03***	−0.13***	0.08***
	(0.006)	(0.023)	(0.025)

Notes. This table reports linear fixed effects regression estimates. All specifications include player, game day, own club, and opponent club fixed effects. Values between parentheses are robust standard errors clustered at the player level.

*Significant at the 10% level; **significant at the 5% level; ***significant at the 1% level.

Table A.6 Quadratic Interactions: Robustness Checks

	Linear FE: Selectchance interactions	
	Non-EU control group	Discourage effect
Euro × *Post*	0.01	0.26
	(0.092)	(0.256)
× *Selectchance*	2.35**	−1.53
	(1.150)	(1.466)
× *Selectchance*^{2}	−2.56**	1.83
	(1.169)	(1.369)
Post		
× *Selectchance*	−0.86	−0.41
	(0.975)	(1.065)
× *Selectchance*^{2}	0.92	0.55
	(0.997)	(1.058)
Midfield	−0.29***	−0.27
	(0.088)	(0.172)
Forward	−0.35***	−0.27
	(0.126)	(0.200)
Injured	−0.23***	−0.20***
	(0.047)	(0.070)
Homegame	0.13***	0.17***
	(0.015)	(0.024)
No. of observations	10,184	3,820

Notes. This table reports linear fixed effects regression estimates. All specifications include player, game day, own club, and opponent club fixed effects. Values between parentheses are robust standard errors clustered at the player level.

**Significant at the 5% level; ***significant at the 1% level.

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