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Sport in Autocratic Regimes: Political Connections in the Soviet Football?

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Аннотация

В данной работе я исследую влияние советских политических руководителей на футбольные соревнования в СССР. Исследование показывает, что политические патроны клубов использовали свою административную силу для привлечения и удержания сильных игроков в своей команде. Дополнительно, я предлагаю и тестирую несколько механизмов, почему патроны могли быть заинтересованы в поддержке клубов. Результаты показывают, что политические руководители могли ориентироваться на удовлетворение потребностей населения для достижения своих карьерных и иных целей. Данная работа может стать основой для дальнейших исследований мотивации политических руководителей в недемократических странах.

Abstract

In this paper, I study the influence of Soviet officials on football competitions. The research shows that patrons were likely to use their administrative power for hiring and retaining strong players while releasing less valuable ones from their clubs. Additionally, I proposed and tested several reasons why patrons could be interested in such kind of interruption. The results could be indicative of the officials' orientation to the public's needs for achieving their own goals. The paper contributes to the study of sports under non-democratic regimes and could lay a ground for further research on officials' incentives in autocratic countries

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1 Introduction

Sports is widely used for economic research as its clear rules and the great availability of data allow researchers to develop and test models related to different fields. Its political economy aspects could also draw attention of the economists. Usually, sports is strongly connected with and financed by the government, especially in non-democratic regimes. Thus, officials could exploit sports as an instrument for politics.

For example, authoritarian states pay great attention to sports as a social institute. Non-democratic countries are found to be more inclined to hosting Olympic Games while conduction of the competition is not economically profitable. The result could be indicative of the non-monetary benefits of the sports for autocracies (Maennig and Vierhaus, 2019).

Another research shows that sports was an important institution in the Soviet Union specifically. Soviet officials allocated large funds under the planned economy, exempted sportsmen from military service, and developed and maintained the popularity of sports in the country, especially among children (Sutter and Smith, 2013). Autocrats were interested in success of national athletes as it could have been used as a powerful tool for propaganda. Particularly, Charles C. Moul and John V. Nye (2009) present evidence of cheating by the Soviet grandmasters in international chess tournaments. The authors found much higher number of draws than expected in games between Soviet sportsmen which implies that Soviets could collude by playing agreed draws and save energy for the following matches with non-Soviet grandmasters in the tournament.

However, existing research do not allow to construct a clear relationship between the politics and sports. Especially, we know very little about the incentives of the officials to engage with sports issues.

Meanwhile, historical examples show that authoritarian regimes see sports as an important part of internal political economy and could have both direct and indirect influence on competitions. Under the rule of Stalin, Lavrentiy Beria, the most influential of Stalin's secret police chiefs, played a great role in the success of Dinamo Tbilisi according to Eric Scott (2019). He uses two illustrative examples to highlight the role of the administrative patron of the team. In 1939, Dinamo Tbilisi lost semifinals in the national cup, but the match was replayed after finals and the opposing team's representatives claimed that the decision was made at the top of the government. In 1953, after Beria was

overthrown, Dinamo encountered an opposite interruption: their victory against Torpedo was replayed and they lost the championship due to that. The author highlights that the team continued to be successful in the season when Beria died but the results got worse in the following seasons.

Based on the illustrative example, one could propose that political authorities could greatly participate in football clubs' life and help them using some administrative power in non-democratic countries like the Soviet Union.

The effect of the officials' administrative power on teams' success, the mechanisms of officials' interference in Soviet sports are mostly out of an interest of researchers but some remarkable works could be found on the field. Specifically, there are research identifying cheating at the internal tournaments in Soviet Union. Sergey Vorontsov (2011) found out that Dynamo Kyiv performed better than expected against other Ukrainian football teams in successful seasons which could be a sign of a collusion within national republics in the Soviet Union. Igor Tylkin (2020) exploits more sophisticated identification strategy. The author proposes that cheating could be revealed by analyzing the match after the fixed one: the teams put less effort in a fixed match and could overperform in the following match due to saved energy. The results imply that the teams from the same republic were more likely to fix games, especially by the end of Soviet football championship.

In this thesis, I am going to continue the study of the influence of officials on results of the Soviet football championship. I came with a hypothesis that the administrative strength of a team's "main supporter"(that is, the political authority interested in the football club's success who will be called a *patron* of the team) could be a proxy for its success under non-democratic regimes like the Soviet Union. The more influential the patron is, the better the sports club plays.

The aforementioned research mostly concentrate on influencing in the sense of direct manipulation with specific game results. The direct interruption of the Soviet officials to the competitions similar to the example of Beria could hardly be regular as it demands great administrative power which is inherent for just several officials and could lead to some reputation risks for both teams and the patrons. However, the indirect influence through the transfers could be even more effective way for patrons to improve their team's performance. Using their administrative power, officials could hire

best players providing them with non-monetary goods, The mechanism could be extremely effective in the absence of a free transfer market and mechanisms of monetary stimulation in Soviet Union.

Therefore, I study how patrons could influence their teams' success through transfers. Greater administrative power could allow the "main supporters" to provide better conditions for strong players or acquire them by using brute administrative force. In this paper, I am planning to test the hypothesis that stronger patron allowed a Soviet team to sign stronger players and analyze the details of the relationship and its implications in case of success.

For achieving the mentioned goals, I collected an extensive dataset on Football championships in the Soviet Union, created a connection with political authorities to study the relationship between sports and political systems. Multiple models are estimated to find and check robustness of the role of political connections in the Soviet football. Besides that, I propose some possible motivations for interruption of the patrons and test them introducing nationality-related features. Also, I hold an additional check for the patron's influence under different political regimes in the Soviet Union.

The hypothesis, its outcomes, and implications, especially some knowledge on incentives of the officials, are expected to contribute to the research in sports economics, especially in the field of sports under non-democratic regimes. Moreover, football could be used as a model of the officials' strategic behavior or competition in autocratic regimes and the research could contribute to the studies of dictatorships in the field of political economy.

The paper is organized as follows. Section 2 describes the extensive dataset collected and used in the paper; Section 3 presents the main results on how transfers were affected by political connections in Soviet football; Section 4 performs robustness checks for the results found; Section 5 presents additional insights on patrons' incentives for helping the football clubs and the stability of results under different regimes; Section 6 summarizes the findings of the paper.

2 Data

The data used in the research could be divided into two groups: data on football players and political patrons. They are combined to an extensive transfers dataset for the Soviet Major Football League for 1945-1990.

2.1 Data on Football Players

The basis of the research is data from football championships. I collected a large dataset of 18326 observations (players per season) on the major league of USSR for 1936-1941 and 1945-1990 from the website fc-dynamo.ru. The dataset consists of statistics and other parameters for all the players who participated in at least one match at the given championship. Data for 1936-1941 is used as a basis for players' experience calculation while the main research is conducted using observations for 1945-1990 to avoid possible concerns and biases caused by the pause in championship due to the World War II. 4369 players and 46 football clubs identified in the dataset for the whole period. 12 to 22 clubs participated in each championship which results in 22 to 40 games played in each season. However, around 30 matches were played in most of the seasons. Each team has 23 players on average participated in at least one match at the season of which 11 to 14 played in a single match (depending on the number of substitutions used).

The data includes basic statistics (games played and goals scored), team and name for the players as well as the binary variable identifying goalkeepers. Also, the dataset contains season statistics (outcomes of every match in the championship) for major league clubs for each season present. Additionally, I collected statistics on international tournaments which includes number of games played and goals scored for the USSR national team, the dates of the first and the last matches for each player ever played for the Soviet national team using Wikipedia. Moreover, using collected data, I calculated a proxy for players' experience at the Major league (number of seasons played so far by the start of the season) and extracted nationality using players' full names based on the surname ending analysis similar to Makarin and Korovkin (2014). As a result, I came up with a unique and extensive dataset covering different characteristics of the players.

In the presence of multiple features for players' strength present, I exploit them as proxies for players' strength with the main focus on appearances at the season. The initial

hypothesis is that the more games a footballer played, the more important and valuable he is for the club. Other characteristics like goals scored, performance for the national team and player's experience at the major league do not build a complete image: goals scored are important only for attacking players, most of the players in the dataset do not have any experience at the national team and players' experience is mostly a proxy for their age, reputation and other characteristics besides their strength as footballers at the moment.

Regarding players' national performance, I assume the footballer was a member of national team in each season from the first till the final match he played for the national team (national team squads are usually stable) in the absence of detailed data. The number of games played and goals scored for the national team is assumed to increase linearly over the seasons of national team membership.

2.2 Data on Political Patrons

The patron of a team is defined as a head of the club's main "stakeholder" like CSKA is the team of the defense ministry of USSR and Dinamo Kyiv is the project of the Ukrainian SSR (a list of official agencies for each club is given in Appendix N). Exploiting such a strategy, I collected data on patrons of all the teams using Wikipedia. For each year, data consists of the name of a patron, his nationality (Russian, Georgian and so on), his experience at the office (years at the top of the agency), and binaries of being a candidate for Politburo membership and member of Politburo and Central Committee.

Team patrons' strength is assessed using several proxies. Membership in Politburo is used as the main determinant for patron's strength: Politburo members are thought to have greater administrative power comparing to other party members. Also, I exploited additional proxies For robustness check of the results for Politburo members. I used binaries for Politburo candidates and members of Central Committee to increase the variation over patrons' strength (they have less power than Politburo members, but stronger than ordinary party members). Another hypothesis is that the longer the official is on the top of his agency, the greater power, knowledge or experience he has to help his team all else being equal.

2.3 Transfers Dataset

As the study mostly concentrates on transfers, it is crucial to define what a transfer of a player is in this dataset. Transfers are considered within the Major league and are identified by the change of a team corresponding to a player from season to season or during the same competition. Using that identification rule, I created a dataset for transfers: if moved to another club after / during the season, player has the target value (transfer) of 1. Otherwise, he has the target value (transfer) of 0.

For each observation, I match the player's statistics for the preceding season (all non-binary features are demeaned for easier interpretation), the characteristics of the patrons and clubs of the previous and approaching seasons and additional binary variables. What are the additional binaries? I created dummies for the nationalities: whether player's nationality matches with the patron's (for both seasons before and after) and/or with the prevalent nationality of the region when their football club is located. Also, binaries for general secretaries of the USSR are created (dummy for period of Stalin's rule and so on).

3 Methodology and Main Results

The section is organized as follows: first, I study the sports-related determinants of transfers. Second, I formulate the main hypothesis on political connections in Soviet football and test it using different specifications.

All the standard errors are clustered by teams before the transfer if not stated else.

3.1 Transfer determinants

As the first step of the analysis, I study how the probability of a transfer relates to players' characteristics. In the basic specification, I regress the binary of a transfer on the appearances (games played) of a player in the previous season to check that the main determinant of the player's value for the clubs is credible. Theoretically, the greater number of games played by the footballer is associated with the lower probability of a transfer as both the player and the team are happy with each other. The contrary is true for players who played only a few matches as both the player and the team have some

incentives for a transfer all else being equal.

Moreover, I've added other characteristics of the players to check how do they contribute to the transfer probability and whether the main value determinant, number of appearances, remains significant. To account for variation over time and some variation in teams' strength, I include fixed effects on both time and football clubs in the seasons before and after the possible transfer.

The results of the discussed regressions are presented in Table 1. The first two columns are Ordinary Least Squares (OLS) regressions while the third one is Logit model. The specification is optimal as the experiments with squares of the features added do not show significance of square terms. Therefore, linear terms are acceptable and sufficient for further analysis.

The results show that the effect of appearances is negative and statistically significant at 0.1% significance level as expected: footballers played 10 matches above the average in the season have 4% less probability of changing their club comparing to ones played the average number of games. And the outcome remains stable while adding other characteristics. That is, the Soviet clubs retained players participated in most matches. Absence of monetary incentives in the Soviet transfer market could have made them less prone to change their clubs.

As for other determinants, more goals scored contribute to higher probability of changing your club. Being currently a player of the national team contributes to 3.5% decrease in the probability of a transfer which is significant. Also, the more experienced the player is, the higher the probability of his transfer. This could be interpreted through the age of the players: in the presence of players' performance indicators, experience could work as a proxy for player's age. In that case, having poor performance is less liked for old (experienced) players than for young footballers which leads to a greater probability of a transfer.

	Dependent variable: transfer		
	OLS		*Logit*
	(1)	(2)	(3)
appearances_before	-0.003^{***}	-0.004^{***}	-0.041^{***}
	(0.0003)	(0.0004)	(0.004)
goals_before		0.001	0.011
		(0.001)	(0.012)
experiences		0.011^{***}	0.114^{***}
		(0.001)	(0.014)
national_goals_before		0.005^{**}	0.070^{**}
		(0.003)	(0.032)
national_games_before		-0.002^{***}	-0.029^{***}
		(0.001)	(0.011)
active_national		-0.035^{***}	-0.500^{***}
		(0.013)	(0.180)
Constant	0.214^{***}	0.241^{***}	-1.159^{**}
	(0.047)	(0.047)	(0.470)
Observations	9,677	9,677	9,677
FE Year	Yes	Yes	Yes
FE Team Before	Yes	Yes	Yes
FE Team After	Yes	Yes	Yes
R^2	0.140	0.148	
Adjusted R^2	0.128	0.135	
Note:			*p<0.1; **p<0.05; ***p<0.01

Table 1: Football-related Determinants of Transfers

3.2 Political Connections

At the second stage of the analysis, I add political patrons to the aforementioned regression and check whether their administrative power could change the picture.

3.2.1 Hypothesis and Methodology

The baseline hypothesis is formulated as follows: the greater administrative power of the team's patron is associated with the higher probability of signing or retaining a strong player and (or) the higher probability of releasing a weak player all else being equal.

In this section, I will use membership in Politburo as the proxy for patron's strength as it allows to distinguish the possible influence of the most powerful officials regarding the Soviet hierarchy of power. Using the binary by itself and in the interaction with the player's strength, I could find the effect of having a powerful patron on signing and releasing players relative to their value.

To start with, I present the specification for the scenario of retaining players.

$$transfer_{i,t} = \alpha_0 + \alpha_1 * apps_{i,t} + \alpha_2 * pb\_b_{i,t} + \alpha_3 * pb\_b_{i,t} \times apps_{i,t} + year_t + team\_b_i + team\_a_i + \epsilon_{i,t}$$

where $transfer$ is the binary target showing whether the player i changed his club at year t. $apps$ account for the number of appearances by the player i at the preceding season. pb_b is a dummy variable showing whether the patron of the previous season's club of the player i is a member of Politburo. Fixed effects on time and clubs in both seasons are used to account for variation over time and some variation in teams' strength.

3.2.2 Expected Results

The main coefficient of interest is α_3 which is expected to be negative as the teams related with Politburo members are expected to have higher probability of releasing less valuable players (who played the less number of matches) and lower probability for the most valuable players.

For the scenario of signing players, I used the symmetric specification with patron's

politburo membership for the team of the following season. Also, I used them together to account for the interaction of patrons of different levels.

3.2.3 Empirical Results

The results of the discussed regressions are present in Table 2. Standard errors are clustered by team of the previous season. However, clustering by year or team of the following season does not change coefficients' significance. The first two columns account for the scenarios of retaining and signing players respectively. The third column considers two scenarios together while the fourth column estimates the same specification using Logit model (OLS used for the first three columns).

The estimation is in line with the hypotheses: connection with Politburo members helps the clubs to sign and retain stronger players. And the third specifications, which accounts for strengths of both teams' patrons in relation with each other, gives even stronger results: footballers played 10 matches above the average have 10% higher probability of staying in or being signed by the team of a politburo member.

The result could indicate that officials' administrative power helps in gathering stronger team in their region of influence. Patrons could be interested in better results of the main football club under their patronage to either show their great management skills which is an important reason to be promoted or just for showing their power and getting a profit not related to their career. Another hypothesis is that greater results of the local teams could increase people's happiness and contentment with the officials in particular. Satisfaction of local people could also indicate patron's management skills as well as leave some space for abusing his power.

The following section presents some robustness check of the results found. Then, some possible mechanisms and implications discussed above will be addressed using additional specifications.

	Dependent variable: transfer			
	OLS			*Logit*
	(1)	(2)	(3)	(4)
appearances_before	−0.002***	−0.003***	−0.003***	−0.030***
	(0.0004)	(0.0004)	(0.0004)	(0.004)
politburo_before	−0.028**		−0.023	−0.462**
	(0.012)		(0.017)	(0.198)
appearances_before:politburo_before	−0.002***		−0.010***	−0.081***
	(0.001)		(0.001)	(0.013)
politburo_after		−0.030***	−0.011	0.019
		(0.011)	(0.017)	(0.194)
appearances_before:politburo_after		0.001*	0.010***	0.074***
		(0.001)	(0.001)	(0.013)
Constant	0.217***	0.215***	0.212***	−1.431***
	(0.047)	(0.047)	(0.047)	(0.468)
Observations	9,677	9,677	9,677	9,677
FE Year	Yes	Yes	Yes	Yes
FE Team Before	Yes	Yes	Yes	Yes
FE Team After	Yes	Yes	Yes	Yes
R^2	0.142	0.141	0.147	
Adjusted R^2	0.129	0.129	0.135	
Note:				*p<0.1; **p<0.05; ***p<0.01

Table 2: Baseline Regression for Political Connections

4 Robustness Checks

4.1 Linear Trends for Clubs

Positions and strengths of the clubs in the championship always changed over time. Therefore, using only fixed effects could be not sufficient for addressing team-specific effects in the regression. Therefore, I also add linear trends over for all the clubs both before and after the transfer to allow the fixed-effects be variable over time.

The results are presented in Table 6 in Appendix where the first column shows the baseline while the second specifications includes linear trends for clubs. The third and the fourth ones are the same with Logit specifications. The effect of a Politburo member still remains significant and of comparable scale which also adds up the credibility for the baseline regression.

4.2 Omitting Football-Related Variables

For addressing concerns on omitted variable bias, related to players' characteristics, I estimated several additional specifications. First, all the significant determinants of the transfers found in section 3.1 are added as the controls for the main regression (with patrons of both teams before and after a transfer are considered) in both OLS and Logit specifications. Also, interactions of omitted determinants with politburo membership binaries are also added and run in both OLS and Logit settings. As before, fixed effects on time and both clubs (before and after transfer) are used and standard errors are clustered by the team before the transfer.

Estimated coefficients are given in Table 7 in Appendix. The results imply that the added characteristics of the footballers could have significant effect on the transfer probability. But what's more important, the initial effect of Politburo membership in interaction with games played remains significant and of comparable scale. Therefore, the interaction's effect is possibly not prone to omitted variable bias regarding players' characteristics.

4.3 Additional Variation on Patrons' Strength

Using only membership Politburo limits the variation on patron's strength. Here, I use three dummies for membership in Central Committee, Politburo and being a candidate for Politburo to allow greater variation of administrative power.

The table 8 shows that teams whose patron is a Politburo member sign and retain players with more games played in the previous season. At the same time teams whose patron is either a Central Committee member or a candidate for a Politburo membership sign more players and lose fewer of them in general comparing to the teams whose patrons are ordinary party member. The opposite sign of interaction for Politburo candidates is not in line with what is expected but this could be an effect of a too small representation: there are only a few of Politburo candidates in the dataset. That is, the effect of Politburo membership is stronger than of other patrons which is consistent with the proposition used for exploiting only Politburo membership dummy.

4.4 Different Proxy for Patron's Strength

As introduced in Section 2, I collected an alternative proxy for patron's power. The official's experience at the office, that is for how many years he rules the agency, could be another determinant for his strength: greater experience could mean greater network of contacts to be exploited for achieving their goals and/or development of their management skills due to more practice and challenges at the office. To address survivor bias and other concerns on the validity of the proxy, it is possible to introduce fixed effects on patrons. In that case, each patron is compared just to himself having different number of years of experience. The variation could be very little as fixed effects on patrons could cover most of the variation in data. Therefore, both specifications with and without fixed effects on patrons will be estimated to check the validity of the proxy.

Table 9 shows the results of the estimation. Patron's experience at the office ($rule_time$ variable) indeed has coefficients similar to Politburo membership dummy. In the second specification with fixed effects on patrons, baseline coefficients for the office newcomers decrease. But the general relationship that the more experienced the patron

is, the better players he signs remains. Therefore, we could conclude that most possibly greater power of the team's patron is in fact positively related to the probability of signing stronger players.

To sum up, all the robustness checks conducted above support the baseline regression and validate the arguments on the importance of political connections for football clubs' success in signing and retaining strong players

5 Possible Mechanisms and Implications

In the previous sections, I showed and argued that patrons could help their teams to sign and retain stronger players. But why? One of the possible explanations is to show their power or management skills for either being acknowledged by the society or being promoted in their political careers.

In this paper, I want to test one of the mechanisms related to the hypothesis: happiness or satisfaction of the local people by the officials could be one of the reasons for patron being acknowledged and showing great management skills. That is, bringing and retaining the best local players could be a way for attracting people to football and making them happy through great results in championships. The factor of local nationality is expected to be of great importance as people are more likely to support their team if local footballers play for it. Therefore, I want to add the factor of nationality and decompose patron's influence on transfers to test the mechanism.

As an additional exercise, I want to look at different Soviet regimes (under different general secretaries) to find out which regime is associated with the greatest political influence on sports if any.

5.1 Nationalities

Here, I want to introduce nationality as another factor influencing the transfer probability. The aim is to test the mechanism saying that the patrons help their clubs to gather local

footballers as well as stronger players to attract the local people more to football.

In the dataset, I have a nationality characteristic for both players and patrons. Also, for each team I matched their republic and for each Soviet republic I matched the core nationality of that republic. That is, Georgians are core nationality of Georgia, Ukrainians of Ukraine and so on. Based on that, I could match player's nationality by the nationality of his team (i.e. the core nationality of the team's region) and its patron and create dummy variables for matching nationalities. Using that data I could decompose the patron's influence on transfers for the nationality-related and general ones.

First of all, I introduce local nationality factor which shows whether player's nationality matches with the core nationality of the team's region (e.g. Ukrainian player in Dinamo Kyiv). Adding the variable into the baseline regression, I expect it to indicate greater probability of signing and retaining the local player. The reason is that people feel more connected with representatives of their own nationality and could be happier with playing for the local team especially in absence of monetary incentives. And in line with the mechanism being tested, powerful patrons could add up to this effect increasing the probability of signing local players.

However, the results presented in the first column of Table 3 do not match the proposition fully: mechanism is backed up by the regression as Politburo members are more likely to sign or retain local players. Yet the cumulative effect for local players is negative in any case and that contradicts the one expected.

The finding could be justified by some omitted variable bias: political connections' effect on signing and retaining players mostly depends on the players' strength. Possibly, the interaction of Politburo membership and / or local nationality factor with players' value could address such issues and change the picture.

In table 3, the second column introduces an interaction of player's value with Politburo membership dummy, while the third column introduces interaction between the player's value and the local nationality binary as well as the triple interaction of player's value, Politburo membership dummy, and the local nationality binary (the latter is calculated for both teams before and after the transfer; the coefficients are not listed in the table due to the coefficient insignificance and interpretation difficulty).

	Dependent variable:			
	transfer			
	OLS			*Logit*
	(1)	(2)	(3)	(4)
appearances_before	−0.003***	−0.002***	−0.002***	−0.020***
	(0.0003)	(0.0004)	(0.001)	(0.006)
local_nat_before	0.076***	0.076***	0.076***	0.489**
	(0.023)	(0.023)	(0.023)	(0.240)
local_nat_after	−0.124***	−0.124***	−0.123***	−1.043***
	(0.023)	(0.023)	(0.023)	(0.237)
politburo_before	0.031	0.030	0.031	0.022
	(0.026)	(0.026)	(0.026)	(0.295)
politburo_after	−0.089***	−0.087***	−0.087***	−0.796***
	(0.025)	(0.025)	(0.025)	(0.284)
local_nat_before:politburo_before	−0.065**	−0.067**	−0.070**	−0.482
	(0.029)	(0.029)	(0.029)	(0.319)
appearances_before:politburo_before		−0.003***	−0.003***	−0.033***
		(0.001)	(0.001)	(0.009)
appearances_before:local_nat_before			−0.001	−0.007
			(0.001)	(0.008)
local_nat_after:politburo_after	0.105***	0.106***	0.108***	0.939***
	(0.029)	(0.029)	(0.029)	(0.317)
politburo_after:appearances_after		0.001	0.001**	0.016*
		(0.001)	(0.001)	(0.009)
local_nat_after:appearances_after			−0.001*	−0.009
			(0.001)	(0.006)
(...)	(...)	(...)	(...)	(...)
Constant	0.222***	0.224***	0.223***	−1.320***
	(0.047)	(0.047)	(0.047)	(0.467)
Observations	9,677	9,677	9,677	9,677
FE Year	Yes	Yes	Yes	Yes
FE Team Before	Yes	Yes	Yes	Yes
FE Team After	Yes	Yes	Yes	Yes
R^2	0.145	0.147	0.147	
Adjusted R^2	0.133	0.134	0.134	
Note:				*p<0.1; **p<0.05; ***p<0.01

Table 3: Political connections effect along with local nationality effect

The same specifications are run with the variable matching player's nationality with patron's instead of the team's region. The results are given in Table 10 and have very little differences. Such findings contradict the theory built: Russian patron of the Georgian team should be interested in signing Georgian players instead of Russian, but the similarity of coefficients tells that both cases are treated similarly. One possible concern is that dummies matching player's nationality with team's or patron's are quite correlated as mostly local people manage the regions. That is, quite often Russian people govern Russian ministries and Russian regions and Armenian clubs are more likely to have Armenian patrons.

To address the issue, I created three nationality-related dummies: player's nationality match only with team's (*team_nationality*), only with patron's (*patron_nationality*) or with both patron's and team's nationality (*patron_and_team_nationality*). Such differentiation might help to identify more credible nationality-based effects. And if the proposed mechanism is backed up by data, we should see that Politburo members should sign and retain local players but not the players of their nationality not matching the local majority (e.g. Russian patron in Armenia should sign more Armenian players but not Russians).

For hypothesis testing, I used specifications similar to the previous ones but using three nationality indicators instead of one. The results are given in Table 4 which contains only coefficients for factors of player signing (except for not significant triple interaction of nationality, Politburo membership dummy and player's strength proxy). Player-retaining-side coefficients are mostly symmetric and are given in Table 11.

Fortunately, the results are in line with what is expected: non-local Politburo members (e.g. Russian patrons in Georgia) sign local (Georgian) players with 7.4% higher probability than the players of their own nationality (Russians) while other patrons are also consistent signing local players with 1.2% higher probability. Also, teams are much more likely to sign strong players of local nationality but not of the nationality of the patron which is also in line with the proposition made in the beginning: players are more connected to their local clubs.

To sum up, nationality differentiation allowed to find some evidence for patrons'

	Dependent variable:	
	transfer	
	OLS	*Logit*
	(1)	(2)
patron_and_team_nat_after	-0.103^{***}	-0.904^{***}
	(0.025)	(0.267)
team_nat_after	-0.067^{**}	-0.504
	(0.032)	(0.364)
patron_nat_after	-0.079^{***}	-0.899^{***}
	(0.022)	(0.262)
politburo_after	-0.148^{***}	-1.336^{***}
	(0.029)	(0.332)
appearances_before:patron_and_team_nat_after	0.019^{***}	0.127^{***}
	(0.002)	(0.020)
appearances_before:team_nat_after	0.021^{***}	0.158^{***}
	(0.003)	(0.028)
appearances_before:patron_nat_after	-0.001	-0.020
	(0.002)	(0.019)
appearances_before:politburo_after	0.010^{***}	0.074^{***}
	(0.001)	(0.013)
patron_and_team_nat_after:politburo_after	0.178^{***}	1.669^{***}
	(0.034)	(0.372)
team_nat_after:politburo_after	0.217^{***}	1.744^{***}
	(0.047)	(0.536)
patron_nat_after:politburo_after	0.155^{***}	1.775^{***}
	(0.036)	(0.410)
(...)	(...)	(...)
Constant	0.205^{***}	-1.452^{***}
	(0.048)	(0.493)
Observations	9,677	9,677
FE Year	Yes	Yes
FE Team Before	Yes	Yes
FE Team After	Yes	Yes
R^2	0.169	
Adjusted R^2	0.155	

Note:

*p<0.1; **p<0.05; ***p<0.01

Table 4: Nationality effect broke down into 3 components: only patron, only team and both. Only part of the table, the player-retaining part is given in Table 11 in Appendix

behavior of signing and retaining local players for attract people to football and make them happier through better results of the teams. By doing so, patrons could solve their needs for acknowledgment or showing stronger management skills.

Notably, the baseline result of patrons signing stronger players remain unchanged with all the controls for nationality-related factors. It could imply that the effect of signing local players could live together with the effect of signing stronger players by Politburo members and the real motivation of Politburo members could consist of multiple factors. These results could lay the ground for more in depth future research in the field. Moreover, the baseline result passed an additional robustness check which adds up for the credibility of results found.

5.2 General Secretaries

Another proposition is to compare different regimes in the Soviet Union. This exercise has two goals: first, to get some possible insights on the regimes; second, to perform an additional robustness check for the baseline results. Year fixed effects could have covered most of the effects of the regimes. However, interacting regime dummies with the interaction of player's value and Politburo membership, I could get some insights on how much Politburo members could cherry-pick best players for their teams.

Table 5 shows the results of the estimation with year fixed effects present. First, Politburo members had less opportunities to help their teams under the rule of Stalin while other regimes have no significant difference between each other. The finding could tell that under the strictest regime the power was concentrated on hands of Stalin and other officials had much less power to use for their own purposes. Second, we performed another robustness check to find that the effect of Politburo was stronger during less strict regimes while still being present even under the rule of Stalin.

	Dependent variable:	
	transfer	
	OLS	*Logit*
	(1)	(2)
appearances_before	−0.003***	−0.030***
	(0.0004)	(0.004)
politburo_before	−0.025	−0.492**
	(0.017)	(0.200)
politburo_after	−0.010	0.017
	(0.017)	(0.195)
appearances_before:politburo_before	−0.009***	−0.075***
	(0.002)	(0.021)
appearances_before:politburo_after	0.010***	0.075***
	(0.001)	(0.013)
appearances_before:politburo_before:stalin	0.0005	0.016
	(0.002)	(0.026)
appearances_before:politburo_before:khrushchev	−0.002	−0.024
	(0.002)	(0.028)
appearances_before:politburo_before:brezhnev	−0.002	−0.014
	(0.002)	(0.022)
appearances_after:politburo_after:stalin	−0.005***	−0.046**
	(0.002)	(0.018)
appearances_after:politburo_after:khrushchev	0.001	0.020
	(0.002)	(0.025)
appearances_after:politburo_after:brezhnev	0.001	0.016
	(0.001)	(0.012)
Constant	0.207***	−1.466***
	(0.047)	(0.469)
Observations	9,677	9,677
FE Year	Yes	Yes
FE Team Before	Yes	Yes
FE Team After	Yes	Yes
R^2	0.148	
Adjusted R^2	0.135	
Note:	*p<0.1; **p<0.05; ***p<0.01	

Table 5: Political connections effect under different regimes

6 Conclusion

In this paper, I study the influence of Soviet officials on football competitions. An extensive dataset is collected to study football statistics in interaction with information on political authorities.

The proposed analysis shows that patrons were likely to use their administrative power for hiring and retaining strong players while releasing less valuable ones. The result remains significant both in statistical and economical sense even after multiple robustness checks: Politburo members are found to hire a footballer played all the 30 matches in the championship with 30% higher probability than one played no match in the season all else being equal.

Based on the main result, I proposed several reasons why patrons could be interested in such kind of interruption. They could have a goal of some social acknowledgement or promotion in their political career by by making local people happier and showing great management skills in the field of football. Using data available I tested some implication of the hypothesis introducing nationality-related features: non-local patrons are more likely to hire local players instead of ones of their own nationality. These results could be indicative of the patrons' orientation to the public's needs.

And the last but not least, I found that under the rule of Stalin powerful patrons had less opportunities to help their clubs, which could tell about the concentration of power on the hands of a single leader.

The results of the paper could contribute to the analysis of sports under non-democratic regimes and to the literature on dictatorships in general. Findings on motivation of the patrons for helping football clubs could lay a ground for further studies on officials' incentives and goals in non-democratic countries.

7 Appendix

7.1 Team-Patron matching

7.2 Additional Tables

	Dependent variable:			
	transfer			
	OLS		*Logit*	
	(1)	(2)	(3)	(4)
appearances_before	−0.003***	−0.003***	−0.030***	−0.029***
	(0.0004)	(0.0004)	(0.004)	(0.005)
politburo_before	−0.023	−0.038**	−0.462**	−0.723***
	(0.017)	(0.018)	(0.198)	(0.229)
politburo_after	−0.011	−0.004	0.019	0.070
	(0.017)	(0.017)	(0.194)	(0.223)
appearances_before:politburo_before	−0.010***	−0.009***	−0.081***	−0.080***
	(0.001)	(0.001)	(0.013)	(0.014)
appearances_before:politburo_after	0.010***	0.008***	0.074***	0.074***
	(0.001)	(0.001)	(0.013)	(0.014)
Constant	0.212***	0.186	−1.431***	−2.216
	(0.047)	(0.163)	(0.468)	(1.795)
Observations	9,677	9,677	9,677	9,677
Linear Trends	No	Yes	No	Yes
FE Year	Yes	Yes	Yes	Yes
FE Team Before	Yes	Yes	Yes	Yes
FE Team After	Yes	Yes	Yes	Yes
R^2	0.147	0.228		
Adjusted R^2	0.135	0.211		
Note:				*p<0.1; **p<0.05; ***p<0.01

Table 6: Baseline Regression with Linear Trends

	Dependent variable:			
	transfer			
	OLS		*Logit*	
	(1)	(2)	(3)	(4)
appearances_before	−0.004***	−0.004***	−0.040***	−0.040***
	(0.0004)	(0.0004)	(0.005)	(0.005)
experiences	0.011***	0.010***	0.117***	0.109***
	(0.001)	(0.001)	(0.015)	(0.017)
national_goals_before	0.005**	0.006*	0.069**	0.072*
	(0.003)	(0.003)	(0.032)	(0.038)
national_games_before	−0.002***	−0.001	−0.028***	−0.019
	(0.001)	(0.001)	(0.011)	(0.013)
active_national	−0.034***	−0.044***	−0.501***	−0.577**
	(0.013)	(0.016)	(0.181)	(0.225)
politburo_before	−0.023	−0.039**	−0.463**	−0.673***
	(0.017)	(0.018)	(0.198)	(0.205)
politburo_after	−0.009	0.008	0.025	0.232
	(0.017)	(0.017)	(0.193)	(0.198)
appearances_before:politburo_before	−0.010***	−0.013***	−0.082***	−0.104***
	(0.001)	(0.001)	(0.013)	(0.015)
appearances_before:politburo_after	0.010***	0.012***	0.078***	0.095***
	(0.001)	(0.001)	(0.013)	(0.015)
experiences:politburo_before		0.034***		0.259***
		(0.005)		(0.049)
experiences:politburo_after		−0.033***		−0.227***
		(0.005)		(0.050)
national_goals_before:politburo_before		−0.061***		−0.566***
		(0.013)		(0.144)
national_goals_before:politburo_after		0.057***		0.557***
		(0.013)		(0.140)
national_games_before:politburo_before		0.006*		0.069**
		(0.003)		(0.035)
national_games_before:politburo_after		−0.007**		−0.130***
		(0.003)		(0.044)
Constant	0.239***	0.231***	−1.138**	−1.171**
	(0.047)	(0.046)	(0.473)	(0.473)
Observations	9,677	9,677	9,677	9,677
FE Year + Teams	Yes	Yes	Yes	Yes
Note:				*p<0.1; **p<0.05; ***p<0.01

Table 7: Baseline Regression with additional players' characteristics

	Dependent variable:			
	transfer			
	OLS			*Logit*
	(1)	(2)	(3)	(4)
appearances_before	−0.003***	−0.003***	−0.003***	−0.032***
	(0.001)	(0.001)	(0.001)	(0.010)
ck_before	−0.013		−0.056***	−0.590***
	(0.013)		(0.017)	(0.195)
politburo_before	−0.044***		−0.079***	−1.034***
	(0.016)		(0.022)	(0.257)
candidate_before	−0.033*		−0.104***	−0.933***
	(0.017)		(0.027)	(0.319)
ck_after		0.030**	0.068***	0.724***
		(0.013)	(0.017)	(0.211)
politburo_after		−0.003	0.055**	0.696***
		(0.016)	(0.022)	(0.267)
candidate_after		0.030*	0.101***	0.887***
		(0.017)	(0.026)	(0.318)
appearances_before:ck_before	0.001		0.001	0.001
	(0.001)		(0.001)	(0.014)
appearances_before:politburo_before	−0.001		−0.008***	−0.074***
	(0.001)		(0.002)	(0.017)
appearances_before:candidate_before	0.002		0.008***	0.060**
	(0.001)		(0.002)	(0.024)
appearances_before:ck_after		−0.0002	−0.001	0.003
		(0.001)	(0.001)	(0.015)
appearances_before:politburo_after		0.001	0.008***	0.069***
		(0.001)	(0.002)	(0.018)
appearances_before:candidate_after		−0.001	−0.007***	−0.058**
		(0.001)	(0.002)	(0.024)
Constant	0.226***	0.202***	0.204***	−1.527***
	(0.047)	(0.047)	(0.047)	(0.481)
Observations	9,677	9,677	9,677	9,677
FE Year	Yes	Yes	Yes	Yes
FE Team Before	Yes	Yes	Yes	Yes
FE Team After	Yes	Yes	Yes	Yes
R^2	0.142	0.142	0.151	
Adjusted R^2	0.130	0.129	0.138	
Note:				*p<0.1; **p<0.05; ***p<0.01

Table 8: Baseline Regression with additional variation over patron's strength

	Dependent variable:	
	transfer	
	OLS	OLS
	(1)	(2)
appearances_before	-0.004^{***}	-0.003^{***}
	(0.0005)	(0.0005)
rule_time_before	-0.002^{*}	0.011^{***}
	(0.001)	(0.003)
rule_time_after	0.002^{**}	-0.014^{***}
	(0.001)	(0.003)
appearances_before:rule_time_before	-0.0001	-0.0001
	(0.0001)	(0.0001)
appearances_before:rule_time_after	0.0002^{**}	0.0002^{**}
	(0.0001)	(0.0001)
Constant	0.209^{***}	0.084
	(0.047)	(0.075)
Observations	9,677	9,677
FE Year	Yes	Yes
FE Team Before	Yes	Yes
FE Team After	Yes	Yes
FE Patron Before	No	Yes
FE Patron After	No	Yes
R^2	0.141	0.217
Adjusted R^2	0.129	0.189
Note:	*p<0.1; **p<0.05; ***p<0.01	

Table 9: Alternative Proxy used for patron's strength

	Dependent variable:			
	transfer			
	OLS			*Logit*
	(1)	(2)	(3)	(4)
appearances_before	−0.003***	−0.002***	−0.002***	−0.018***
	(0.0003)	(0.0004)	(0.001)	(0.007)
patron_nat_before	0.061***	0.061***	0.061***	0.545***
	(0.016)	(0.016)	(0.016)	(0.180)
patron_nat_after	−0.091***	−0.091***	−0.091***	−0.907***
	(0.016)	(0.016)	(0.016)	(0.176)
politburo_before	0.040	0.039	0.040	0.249
	(0.026)	(0.026)	(0.026)	(0.292)
politburo_after	−0.106***	−0.104***	−0.104***	−1.098***
	(0.026)	(0.026)	(0.026)	(0.291)
patron_nat_before:politburo_before	−0.065**	−0.067**	−0.069***	−0.666**
	(0.026)	(0.026)	(0.026)	(0.289)
appearances_before:politburo_before		−0.003***	−0.003***	−0.033***
		(0.001)	(0.001)	(0.009)
appearances_before:patron_nat_before			−0.001	−0.008
			(0.001)	(0.008)
patron_nat_after:politburo_after	0.108***	0.109***	0.110***	1.168***
	(0.026)	(0.026)	(0.026)	(0.293)
appearances_after:politburo_after		0.001	0.002**	0.018**
		(0.001)	(0.001)	(0.009)
appearances_after:patron_nat_after			−0.001*	−0.009*
			(0.0005)	(0.005)
(...)	(...)	(...)	(...)	(...)
Constant	0.233***	0.236***	0.233***	−1.195**
	(0.047)	(0.047)	(0.047)	(0.474)
Observations	9,677	9,677	9,677	9,677
FE Year	Yes	Yes	Yes	Yes
FE Team Before	Yes	Yes	Yes	Yes
FE Team After	Yes	Yes	Yes	Yes
R^2	0.145	0.146	0.146	
Adjusted R^2	0.132	0.133	0.133	
Note:				*p<0.1; **p<0.05; ***p<0.01

Table 10: Political connections effect along with patron nationality effect

	Dependent variable:	
	transfer	
	OLS	*Logit*
	(1)	(2)
appearances_before	−0.002***	−0.020***
	(0.001)	(0.008)
patron_and_team_nat_before	0.047*	0.281
	(0.025)	(0.270)
team_nat_before	0.039	0.199
	(0.033)	(0.375)
patron_nat_before	0.081***	0.879***
	(0.022)	(0.263)
politburo_before	0.078***	0.410
	(0.030)	(0.327)
appearances_before:patron_and_team_nat_before	−0.019***	−0.135***
	(0.002)	(0.020)
appearances_before:team_nat_before	−0.021***	−0.165***
	(0.003)	(0.029)
appearances_before:patron_nat_before	0.0002	−0.001
	(0.002)	(0.019)
appearances_before:politburo_before	−0.010***	−0.083***
	(0.001)	(0.013)
patron_and_team_nat_before:politburo_before	−0.128***	−1.050***
	(0.034)	(0.365)
team_nat_before:politburo_before	−0.180***	−1.345**
	(0.048)	(0.547)
patron_nat_before:politburo_before	−0.121***	−1.318***
	(0.036)	(0.413)
(...)	(...)	(...)
Constant	0.205***	−1.452***
	(0.048)	(0.493)
Observations	9,677	9,677
FE Year	Yes	Yes
FE Team Before	Yes	Yes
FE Team After	Yes	Yes
R^2	0.169	
Adjusted R^2	0.155	
Note:	*p<0.1; **p<0.05; ***p<0.01	

Table 11: Nationality effect broke down into 3 components: only patron, only team and both. Only part of the table, the player-signing part is given in table 4

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