Diversifying Labor Income Risk: Evidence from Income Pooling

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Abstract

This paper studies the effects of a contracting innovation which allows individuals to diversify their labor income risk by sharing labor income above a ceiling into a common pool. I use novel data from professional baseball players to document sign-up correlated with an individual's level of downside protection and sophistication. Players are significantly more likely to experience an injury before expressing interest in the contract and are drafted in later rounds. I find some evidence of productivity declines following sign-up with an instrumental variables approach built around peer networks confirming these results. Increased monitoring proxied for by players pooling with teammates reduces the likelihood of players experiencing a decline in performance after pooling. Players contract with others of similar ability, backgrounds, and occupations to mitigate information asymmetries. These results provide real-world evidence of the ability of individuals to hedge labor income risk through peer contracting.

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Human capital represents nearly two-thirds of an individual's total wealth (Madgavkar et al., 2022). Despite key innovations in modern finance of low-cost portfolio diversification, human capital for most individuals remains largely undiversified.[1] In contrast to robust private health, life, and property insurance markets, only public, government sponsored forms of labor insurance exist with no private market alternatives. Although unemployment insurance helps to improve risk-sharing and overall output in the presence of risk-aversion (Acemoglu & Shimer, 1999; Hombert et al., 2020), it functions as a fixed tax which provides sub-optimal coverage and incentives surrounding an individual's level of effort exerted (Gerard & Gonzaga, 2021; Lusher, Schnorr, & Taylor, 2022) and human capital choice. Chiu and Karni (1998) theoretically show the presence of private information might explain the failure of the private sector to provide labor market insurance; however, no labor market data exists to examine this conjecture or whether optimal contract design can mitigate issues stemming from private information.

In this paper, I study how the imposition of private labor market insurance affects worker productivity, longevity, and features such as selection into these contracts. I use data from a private company that offers minor league baseball players in the United States the ability to "pool" or share a portion of their income beyond a wage ceiling into a common pool with a subset of other players. After pooling, a player remains predominantly exposed to his own labor income path, but he also gains exposure to others' income paths within the same pool. This setting offers three unique features to better understand insurance markets and the ability of contracting solutions to overcome traditional problems linked to private information (adverse selection) and individuals' ex-post incentives (moral hazard). First, productivity data is measured at a granular frequency and player quality is publicly observable with minimal error. Second, by studying short-term changes in productivity surrounding a player's decision to take-up labor market insurance, I can directly

[1]Betermier et al. (2012) provide some empirical evidence of individuals hedging labor income risk through their investment behavior based on 3,815 households that switch occupations in Sweden between 1999 and 2002. In practice, it appears challenging for the average individual to access low-cost methods for hedging labor income risk.

estimate how an individual's increased diversification in payout function affects his productivity. Third, using variation in an individual's pooling partner choice, I can document heterogeneous treatment effects stemming from monitoring benefits based on an individual's proximity to his pooling partners.

Prior to the offering of income pooling, professional baseball players were exposed to large tournament incentives with a limited ability to hedge any of their future earnings potential besides the initial draft bonus they receive. I begin by documenting that players that express interest ("platform") and ultimately join ("pool") income pools are negatively selected overall. Players that platform and pool are significantly more likely to be drafted in a later round in the Major League Baseball (MLB) draft indicating these players are of lower quality. Connected to downside protection, players with smaller signing bonuses and players from international countries are significantly more likely to platform and pool. Consistent with platforming increasing a player's outside options without a real cost, I find platformed players that have not pooled yet are of higher ability and receive significantly more playing time than their pooling counterparts.

The impact of income pooling on productivity is not theoretically obvious, making this an empirical question. Income pooling might improve productivity through reducing player stress (Lazarus, Deese, & Osler, 1952), increasing information sharing and collaboration (Mesmer-Magnus & DeChurch, 2009), or allowing players a form of collateral to invest more in their own development (Ghosh & Vats, 2022). However, income pooling might also reduce productivity through increasing the incentive of a player to free-ride as his pay-for-performance sensitivity decreases (Andreoni, 1988).

There are significant issues in empirically identifying the impact of income pooling on player productivity. Within insurance markets, adoption timing is often correlated with private information which makes the insurance product particularly valuable to the individual *ex-ante* (Einav & Finkelstein, 2018). This connection leads to a spurious estimated effect of insurance as the dip in productivity is not associated with an *ex-post* shift in incentives but rather the transmission of the private information shock. In the ideal experiment, players would be randomly assigned treatment status as either poolers or non-poolers to assure treatment adoption timing is exogenous to a player's private information. This paper exploits a player's heterogeneous exposure to peer networks to proxy for an individual's exposure to income pooling which is typically spread through word-of-mouth advertising and player referrals.

I exploit the adoption of individual players into income pooling to study subsequent changes in player performance on both the intensive margin of ongoing performance and extensive margin of player exit from minor league baseball. I measure player productivity using a variety of hitting and pitching statistics corresponding to a player's output and efficiency.[2] For hitters, I document significant declines in playing time by about 10 percent using an OLS model while hitting efficiency measures decline in magnitude with an effect size of about 5 percent of the mean outcome measure (albeit estimated to be statistically insignificant). Pitchers experience comparable declines in playing time although measures of performance changes are more mixed.

I find evidence of non-random adoption timing in which pooling adoption surrounds longer periods of increasing performance with a short-term decline in the month before treatment. Hitters and pitchers that platform have a significant pre-trend increase in their productivity driven by increases in their playing time (plate appearances and innings pitched, respectively). In the month before platforming, hitters experience a decline in playing time while pitchers are significantly more likely to experience an injury. I find no short-term differences in injury surrounding pooling timing indicating the ability of the pooling process to serve as a disciplining mechanism.

To gain exogenous variation in a player's adoption timing, I instrument for a player's timing of treatment using either: (1) the lagged proportion of active players from the focal player's birth location that have platformed or (2) the lagged proportion of active players from the focal player's Major League affiliate (e.g. the New York Yankees) that have platformed. The relevance of these

[2] I use monthly data in the main specifications to better capture treatment timing and short-term changes in performance, but I find similar results using annual data as shown in the Internet Appendix.

identification approaches are aided by two institutional details. First, other players are more likely to be reached out to by the focal player directly or by the income pooling company when a player's peer expresses interest in platforming. Second, the pooling company hired a sales person halfway through the sample targeting international players providing quasi-random variation in a player's exposure to pooling relative to his own private information. Empirically, both instruments display strong relevance with the location (team) instrument having a first stage F-statistic of ≈ 40 (20) in explaining players' pooling timing in the full player $\times$ month panel. In combination with institutional details, I find evidence supporting the exclusion restriction by conducting a placebo test that evaluates performance changes among MLB players unaffected by income pooling yielding no significant findings.

Implementing an instrumental variables (IV) estimator, I document significant performance declines for players pooling in periods of high pooling salience proxied for by increasing platforming rates of players from his birth location. Pooling hitters and pitchers experience a significant decline in their overall playing time, productivity, and efficiency. These estimated declines are economically large with an effect size of about one standard deviation across measures of playing time, productivity, and overall efficiency. These performance differences are not driven by differences in a player's promotion status, seasonal differences across players at different levels, or increased risk of injury. I find weaker evidence of performance declines when instrumenting for a player's pooling adoption based on the platforming rate of his major league affiliate teammates. Combined with the fact that players are much more likely to pool with a major league affiliate teammate in response to their affiliate teammates' increased platforming rate, these results are supportive of the benefits of increased monitoring to mitigate free-riding incentives.

Consistent with players pooling with peers to mitigate information asymmetries and free-riding incentives, I find significant evidence of homogeneity within pools. Players pool with peers from a similar home country, age, and position grouping to mitigate free riding incentives after pooling. Additionally, players pool with others of a similar draft round and performance statistics providing evidence of pooling based on observable characteristics to mitigate a loss in expected value from exchanging equity.

Finally, I examine the extensive margin of income pooling to change a player's career length measured by their exit from minor league baseball. Overall, platforming and pooling players are significantly more likely to remain in minor league baseball than the average minor league player with an increased likelihood of about 25 percent relative to the mean. Consistent with effective contract design and incentive alignment, I find that platforming and pooling players experience no increased likelihood of exiting minor league baseball after platforming or pooling. This result stems from effective contract design as the company makes pooling players that retire voluntarily ineligible to receive future distributions from the pool.

To my knowledge, this paper is the first to provide real-world evidence surrounding a private labor market insurance offering. This paper makes two novel contributions to the existing literature on adverse selection and moral hazard within the labor market and broader insurance literature. First, I provide detailed evidence of negative selection into a unique form of labor market insurance and entry correlated around periods of increasing (decreasing) long (short)-term performance. Second, I document causal estimates of output and productivity declines after pooling driven by free-riding incentives in the absence of monitoring. This paper is also broadly connected to the unemployment insurance literature which has previously documented negative effects on productivity following an increase in benefits(Lusher, Schnorr, & Taylor, 2022) and the broader costs of social programs(Gerard & Gonzaga, 2021).

This paper also adds to the human capital literature by examining the effects of a contracting solution that allows individuals to directly diversify idiosyncratic labor income risk. Viceira (2001) and Betermier et al. (2012) document the investment portfolio implications for investors with non-tradeable labor income of varying risk levels, and this paper examines the effects stemming from diversifying an individual's labor income stream. Related to the broad literature on selection into risky income paths like entrepreneurship based on earnings potential and outside options(Catherine, 2022; Hombert et al., 2020; Manso, 2016), career risk (Gottlieb, Townsend, & Xu, 2022), and individual characteristics such as risk-aversion (Kihlstrom & Laffont, 1979; Levine & Rubinstein, 2017) this paper documents changes in productivity stemming from reducing an individual's labor income risk.

This paper adds to a literature on trust, monitoring, and contracting to overcome frictions and the compensation literature. Using evidence from the choice of pooling partners by individuals, I find substantial evidence of pooling homogeneity of players pooling with others from a similar background consistent with the importance of trust in contracting (D'Acunto, Xie, & Yao, 2022; Gennaioli et al., 2022). The null performance effects that follow pooling with closer peers provides evidence consistent with the positive effects of monitoring (Karlan, 2007) and its ability to reduce free-riding incentives. Additionally, this paper contributes real-world evidence to the impact of reducing an individual's pay-to-performance sensitivity–within narrow intervals. Connected to the growth of income driven repayment plans for student loans which reduce an individual's pay-to-performance sensitivity (Yannelis & Tracey, 2022), this paper provides evidence of the adverse selection and productivity declines that stem from these contracts.

1 Institutional Details

1.1 Minor League Baseball

Major League Baseball (MLB) is the top professional baseball league globally consisting of 30 affiliates across the United States and Canada. In 2022, MLB revenue was nearly $11 billion (Brown, 2023) while the average MLB player earned $4.22 million annually(Blum, 2023). Each MLB affiliation has a developmental system of teams consisting of players whom teams possess the playing rights to typically by drafting them through the annual MLB Draft or signing international players through international free agency. Major league affiliations have minor league teams across four main levels consisting of: (1) Rookie league for younger domestic and international players, (2) A-level which currently consists of single-A and high-A, (3) Double-A level, and (4) Triple-A level which is the highest level of minor league baseball.[3] Players are placed at an initial level by their major league affiliate based on their age and skill with promotions following when a player has demonstrated mastery at a certain level.[4] In 2022, minor league baseball consisted of about 5,000 players across 165 teams with 120 teams at the A-level or above and 45 rookie league teams. Each level also has a distinct season length and number of games with Rookie League containing 72 games, High-A, Single-A, and Double-A with 144 games, and Triple-A with 150 games (Axisa, 2022).

1.2 Minor League Baseball Draft and International Free Agency

To be eligible for the MLB draft, players in the United States, Canada, or other U.S. territories must either enter straight from high school, one year after junior college, or after turning 21 or three years of college at a four-year university. The order and allocated signing budget in the annual draft gives priority to the worst performing major league teams with these teams receiving the top selection in every round and the largest bonus pool to sign eligible players.[5] Eligible players have the ability to negotiate with a team for their draft signing bonus and the ultimate decision of whether to sign; however, forgoing signing results in a player sitting out for a year until the following

[3]Prior to 2019, the A-level also consisted of a low-A league which was ultimately removed following MLB's restructuring of the minor league baseball in 2019 (Stephen, 2019).

[4]MLB affiliates have complete control of players within their organization. The Rule 5 Draft exists to limit the ability of teams to stockpile too many young players within their organization by delaying their development. Minor league players are eligible to selected by another organization if they are not on a major league team's 40-man roster and were 18 (19) or younger (older) on the June 5th preceding their signing and this is the 5th (4th) Rule 5 draft upcoming. Teams selecting players in the Rule 5 draft must keep a player on its active MLB roster for the entire season after the draft (Cooper, 2020).

[5]Historically, the MLB draft spanned 40 rounds until being shortened to 20 rounds in 2021.

draft.[6,7] International free agency functions in a more free-market environment with eligible players being from outside of the United States and Canada above the age of 16 with the worst teams from the prior year receiving the largest bonus pool allocation.

1.3 Minor League Baseball Labor Market

Historically, the compensation of minor league baseball players was split between the MLB team affiliate and the minor league team which eventually shifted to the MLB affiliate covering the player's entire salary (Cooper, 2019). Professional baseball players have historically received below free-market wages due to the presence of the reserve clause from 1887 to 1976 which barred player mobility and MLB's exemption from the Sherman Anti-Trust Act which gave it monopsony power. The removal of baseball's reserve clause at the MLB's top level in 1976 has been followed by an increase in major league player salaries of 2,500 percent from 1976 to 2023. In contrast, minor league player salaries have increased just 70 percent over the same time period while the Consumer Price Index (CPI) has increased 315 percent over the same time period. Until 2022, the majority of minor league baseball players made between \$4,800 and \$14,700 annually affirmed by the Save America's Pastime Act in 2018 which exempted minor league baseball players from minimum wage laws and overtime pay (May, 2023). In 2022, Major League Baseball agreed to a \$185 million settlement for the breach of minimum wage and overtime pay laws (Waldstein, 2022), while MLB's first collective bargaining agreement with minor league baseball players more than doubled player salaries across all levels.[8]

Upon making the major leagues, players earn the league minimum annual salary over their first

[6] The average bonus in the 2022 MLB draft was just over \$500,000 with the median player receiving \$130,000.

[7] In the case a team is unable to sign a pick within the first three rounds, they are unable to use the allocated bonus pool in the given year but receive a similar compensatory pick in the following year's draft (LINES, 2023)

[8] Rookie league salaries increased from \$4,800 to \$19,800, Low-A from \$11,0000 to \$26,200, High-A from \$13,800 to \$27,300, Double-A from \$13,800 to \$27,300, and Triple-A from \$17,500 to \$35,800 (CBS News, 2023)

three years (which was $720,000 in 2022) of service time. Players are eligible for arbitration between years three to six of their service time which allows them to earn a larger, but still below market wage as players are only able to contract with their own major league affiliate(MLB.com, 2023). After accumulating six years of service time, players are eligible for free agency and are able to sign with any team of their choosing.

On average only about ten percent of minor league baseball players make it to the major league level at some point in their careers. The results in Appendix Table A.1 document a player's expected career outcomes based on his draft position using players entering professional baseball after 1985. The average player drafted in the 1st (5th) round had a 65 (31) percent chance of making the major leagues at some point, an expected CPI-adjusted signing bonus of $2.54 ($0.37) million, and CPI-adjusted career earnings of $20.28 ($3.46) million.[9] The tournament incentives present within the MLB system combined with idiosyncratic player risk of succeeding have resulted in players bearing large, undiversified labor income streams. The next section provides institutional details on the introduction of a private market contracting solution that allows players to diversify their idiosyncratic labor income risk.

2 Institutional Details Income Pooling

2.1 Income Pooling Agreements

The data on income pooling participants is provided by a confidential data provider from 2017 onwards. The pooling arrangements are contractual agreements signed by minor league baseball players to pay a portion of their future income beyond a set hurdle rate back into a common pool

[9]The decline in players across round numbers is driven by the first round being larger than the other rounds due to the presence of competitive balance picks and a decreasing likelihood of players signing as the draft progresses.

shared among the pool participants.[10] The pooling company does not charge pool participants for contract origination but is instead compensated through taking a 10 percent cut of distributions beyond the hurdle amount. Figure 1 shows the time series of players that have expressed interest ("platform") in joining an income pool and when players sign-up ("pool").[11] Nearly 1,000 players have joined the company's platform while about 500 of those players have formally joined a pooling agreement with a take-up rate of approximately 50 percent. For reference, the entire minor league baseball system has historically consisted of about 6,000 players annually.

Players typically hear about these income pooling agreements through peer networks consisting of teammates, friends from a player's home country, or directly from sales agents of the income pooling company. After a player expresses interest in joining an income pool, the company attempts to find players with a similar future earnings potential either among an existing pool, players that have already platformed, from players recommended by the platforming player, or from the broader universe of minor league players. Platforming players are then approached with a potential match, and given a choice of whether to join the pool or reject the match and continue to wait. The time period from players expressing interest to formally joining a pool is quite short. Appendix Figure A.2 shows the number of days to platform and pool over the sample period while the average and median number of days between platforming and pooling is 63 days and 17 days, respectively.

The income pooling company attempts to match players with similar expected future earnings while the ultimate choice of pooling belongs to the individual player. Anecdotally, the company attempts to place players in smaller pool sizes in which pools form a community of connected players. Appendix Figure A.3 documents the heterogeneity in pool size over time with the largest pool consisting of over 20 players while the median (average) pool size consists of 4 (5) players across the company's 88 income pools. Players in the same income pools also display significant

[10] In 2023, the hurdle amount was \$2.16 million specified as three times the league's minimum salary of \$720,000 implying a player would begin paying into the income pool after spending three years in the major leagues.

[11] Appendix Figure A.1 shows the interpolated platforming and pooling sign-up within the context of the minor league baseball season.

homogeneity across demographic and playing characteristics. For example, Figure 2 documents that over 90 percent of income pools are comprised entirely of only American players or only international players. Similar evidence exists across player age, position, draft round, and playing statistics that suggest players desire to pool with similar peers to mitigate information asymmetries that might lead to adverse selection or monitoring problems leaving potential free-rider incentives unchecked.

Appendix Figure A.4 documents the spread of pooling over time across domestic and international players. Prior to 2020, the company's primary client base consisted of about 80 percent U.S. domestic players and 20 percent international players. Following 2020, the company hired a full-time sales member to target international clients and the company saw large increases in their international clients to account for 60 percent of their clients in the beginning of 2023.

To reinforce the impact of peer networks on player sign-up, Figure 3 shows the cumulative sign-ups of "platformers" and "poolers" by a player's birth location. The figure shows spikes in player sign-up following an initial wave of "platformers" within a location followed by a smooth horizontal line indicating the end of a peer effect network shock. Figure 4 shows similar patterns of peer network effects present in the spread of income pooling adoption across MLB organizations. In early 2018, the St.Louis Cardinals had nearly 30 minor league players who had joined income pooling agreements (nearly double the total of the next major league affiliate) while the growth rates in adoption show notable serial correlation within team. Additionally, the pooling contract provider offers minor league players a referral bonus which further strengthens the peer networking effect among players.

3 Data

I begin with a list of all historical baseball players provided by Chadwick's Baseball Bureau Register.[12] I condition down to include only professional baseball players whose last season occurred after 2016, whose first season in the MLB occurred after 2017, and players who have not yet made the major leagues. This sample selection is aimed at creating a universe of players that is comparable to the target clientele of the pooling provider. These data filters result in the inclusion of 19,038 players which meet these criteria. I also compile monthly performance data after 2012 from Baseball Reference on major league affiliate leagues of various playing time, output, efficiency, injury, and promotion data across both hitters and pitchers. For example, hitter playing time measures consist of plate appearances (PAs), output of runs scored (R), and efficiency consists of on-base plus slugging (OPS). For pitchers, playing time measures consists of innings pitched (IP), output of strikeouts (K's), and efficiency consists of earned run average (ERA). This player panel is merged with monthly performance data after 2012 and results in a panel of 247,327 player $\times$ month observations. All continuous playing statistics are winsorized at the 5th and 95th percentile.[13]

3.1 Selection into Platforming and Pooling

Table 1 provides a t-test of means comparison across the 864 players that express interest in joining an income pool ("platformers") and the remainder of the sample. On average, platforming players are younger in their first professional year (19.23 years versus 19.75 years) and are also more likely to be from outside the United States (60 percent versus 52 percent). Platforming players have statistically insignificant differences in their likelihood to make it to the major leagues in comparison to non-platforming players (7 percent versus 8 percent). The subset of drafted platforming players

[12] I thank Chadwick's Baseball Bureau for making the data available at https://github.com/chadwickbureau/register.

[13] Using monthly data allows me to better capture treatment timing and dynamic treatment effects while providing greater comparability across player types across minor league levels. The Internet Appendix contains comparable analysis with the level of performance data at the annual level.

tends to be drafted later (19th round versus 15th round) and receive a smaller signing bonus ($209,000 versus $556,000) than their non-platforming counterparts indicating these platforming players are of lower innate ability. Drafted platformers tend to be more likely to have been selected from college (88 percent versus 70 percent), and the average player platforms 2.75 years after joining an MLB affiliate.

Transitioning to minor league promotions, platforming players start their careers at a slightly lower level (1.16 versus 1.25) on average than their control group counterparts consistent with the platforming players being younger than their control group counterparts. This initial gap remains relatively constant as players develop in their first three seasons (2.85 versus 3.01) while the pre-platforming statistics suggest that the platformers have largely outperformed. The average platforming hitter's efficiency performance (OPS) is about four percentage points higher (0.70 vs. 0.66) and plays substantially more evidenced by the gap in plate appearances (203 vs 187).[14] These outperformance results are similar for platforming pitchers as they allow significantly fewer runs on average (4.02 versus 5.04) and pitch significantly more innings than their non-platforming control group(40.97 versus 37.19).[15] In summary, although drafting measures imply negative selection among platforming players, the superior performance of their statistics suggests a more balanced scenario.[16]

Platforming players benefit from a call-option like feature for the ability to join a pool without the necessity to join an undesirable set of peers which might exacerbate negative selection into pooling. Table 2 provides a t-test comparison of means to examine differences across those that ultimately join an income pool with those that have yet to pool. These two player groups are quite similar in terms of age and other player characteristics. However, poolers are drafted significantly later than their platforming counterparts (round 21 vs round 17) and have significantly smaller signing

[14] On-base percentage plus slugging (OPS) is a commonly used measure of aggregate hitter performance quality while the number of plate appearances (PA) captures the amount of playing time a hitter receives.

[15] Table A.2 documents similar patterns when comparing pooling players versus non-poolers.

[16] This outperformance is partially driven by the fact that platforming and pooling players are older for their respective levels rather than these players being of a higher, time-invariant ability.

bonuses (\$136,000 vs \$263,000) suggesting pooling players are of lower innate ability. Additionally, pooling players are significantly more likely to be drafted from college (92 percent versus 84 percent) which also supports this negative selection channel as high-school players are often the most talented players if they are able to forgo playing college baseball to enter the minor leagues directly.

Regarding their minor league career trajectories and statistics, the subset of pooling players starts at a lower level (1.11 versus 1.20) than their platforming counterparts but this gap dissipates by the beginning of a player's third season (2.69 versus 2.71). The pooling hitters have significantly fewer plate appearances (190 vs 216) while the remainder of the performance measures are well-balanced. One of the largest difference between pooling and players that are currently platformed is their pace to join the platform. Poolers take an average of 2.42 years to platform after joining the minor leagues while platformers take significantly longer at 3.06 years. Although some platforming players eventually become poolers, there remains a fundamental difference in the selection into pooling based on player quality, proxied through draft position status by player type.

Table 3 examines a player's decision to platform and pool in a regression setting. Overall, the results in column (1) shows that platforming players are significantly more likely to be given smaller draft signing bonuses, more likely to be drafted from college, and significantly less likely to be a pitcher.[17] The results in columns (2) and (3) document that platforming hitters are significantly more likely to be drafted in a later round and given a smaller signing bonus while only the former is true for pitchers. The outperformance of platforming hitters and pitchers both in terms of playing efficiency and playing time reflects that the negative selection into platforming is not too extreme. Columns (4) to (6) examine the results for selection into pooling versus counterfactual players that have not yet entered income pooling agreements. Similar trends are present that pooling players are drafted in later rounds and given smaller bonuses. The outperformance of pooling players remains statistically significant but declines in magnitude by about 50 percent. Overall, about 4.50 percent

[17] I interpolate a player's draft round and bonus to the average and include a missing variable indicator when the respective variable is missing.

of players have platformed while about 2.25 percent of those players have pooled over the sample period.

4 Empirical Strategy

4.1 Productivity Changes Following Pooling

Thus far, we have observed that platforming and pooling players are negatively selected by draft pick placement and signing bonuses while also showing some signs of positive selection based on aggregate playing statistics. To examine the impact of pooling on hitter and pitcher performance, I estimate the following regression specification:

$$Performance_{i,j,k,m,y} = \beta_0 + \beta_1 Treat_i \times Post_{m,y} + \mathbf{X}_{i,j,k,y} + \gamma_i + \delta_{m,y} + \tau_{j,m} + \rho_k + \epsilon_{i,j,k,m,y} \quad (1)$$

Where $\text{Performance}_{i,j,k,m,y}$ is the outcome measure of interest for player i, playing at level j, on major league affiliate k, on month m, in year y. $\text{Treat}_{i,j,k} \times Post_{m,y}$ is the estimated effect of pooling, γ_i indicates a player fixed-effect which subsumes Treat_i to account for time-invariant differences across players, $\delta_{m,y}$ is a time fixed effect to account for differences between observed time units which subsumes the $\text{Post}_{m,y}$ main effect term, $\tau_{j,m}$ denotes the level that a player begins month m at to control for systematic differences across levels that is constant across years (e.g. lower level players play fewer games within April and September every year than their higher level counterparts), ρ_k denotes major league affiliation fixed effects to capture time invariant differences across major league affiliates, and $\mathbf{X}_{i,j,k,y}$ is an age fixed effect to control for differences across performance linked to a player's age over time.

This OLS estimator compares the changes in performance for pooling players relative to their non-pooling counterparts with the aid of demeaning to enable comparability across player performance over time. Table 4 presents the estimated results for hitters in Panel A. After signing up, column (1) shows that hitters experience a decline in playing time of about four plate appearances (six percent of the mean) and column (2) documents that the overall output of hitters declines 0.7 fewer runs per month (nine percent of the mean). Columns (3) to (6) include several measures of hitter efficiency which are estimated to be negative, albeit statistically insignificant with estimated declines of about three percent of the mean. The results in column (7) show that pooling players have no change in their likelihood of promotion after pooling while their likelihood of injury declines by about 5 percent relative to the average month injury chance.

Panel A of Appendix Table A.3 contains comparable estimates for the estimated effect of platforming and documents similar declines in playing time (Plate Appearances), output (Runs), and efficiency (OPS).[18] Figure 5 plots the estimated t-statistics from the regressions of the estimated effects of platforming and pooling for hitters and Appendix Figure A.5 provides the economic significance by scaling the coefficient estimate by the covariate's average. Interestingly, platforming hitters have a ten percent higher likelihood of injury scaled by the average monthly likelihood of injury ($\approx$ five percent). The fact that the likelihood of injury after pooling declines below zero provides evidence consistent with the pooling mechanism providing some resistance to widespread adverse selection.

Table 4 displays the estimated results of pooling for pitchers in Panel B. The results in column (1) documents that pitchers experience a decline in playing time of about 0.60 innings per month ($\approx$ five percent of mean), and column (2) shows a statistically significant decline in output proxied through an estimated decline of 0.80 strikeouts per month ($\approx$ seven percent of the mean). Column (3) documents a pitcher's fielding independent pitching (FIP) increases by about 15 percent relative to its mean providing some evidence of pitcher efficiency declines while column (4) shows there is almost no translation to the actual runs a pitcher allows.[19] Lastly, the results in column (7)

[18]The estimated effect of platforming contains both players that have yet to pool during the sample period and those that have joined an income pool.

[19]Fielding independent pitching (FIP) attempts to net out the impact of the defense's performance on a

find insignificant increases in promotion likelihood after pooling while a pitcher's injury likelihood declines slightly.

Panel B of Appendix Table A.3 contains comparable estimates for the estimated effect of platforming and documents similar declines in playing time (Inning Pitched), output (Strikeouts), and efficiency (Strikeout/Walk Ratio). Figure 6 documents that most of these estimated performance declines are larger for platforming than pooling although Appendix Figure A.6 documents a large increase in the likelihood of promotion for pitchers after platforming which might partially be driving this decline in performance.

The initial estimated model is akin to a staggered Differences-in-Differences design, in which the estimated effects are causal under the identifying assumption that in the absence of treatment (platforming or pooling), treated and non-treated players would have continued to trend the same way. More succinctly, for causal identification, this design-based identification strategy relies on exogenous treatment timing to subsequent changes in player performance. The lack of notoriety of the pooling company and the need for others to agree to pool with another player at time t limit adverse selection. However, it's still possible that players pool when they expect their playing time or performance to decline or experience improvements in performance they want to capitalize on.[20] The former would introduce a negative bias to these initial estimates as the decision to pool is correlated with an upcoming decline in performance while the latter would introduce a positive bias as the presence of pooling is correlated with subsequent increases in performance.[21]

pitcher by building a measure upon outcomes controllable by a pitcher such as his strikeouts, walks allowed, and home runs allows. An increase in a pitcher's FIP reflects a decline in estimated performance.

[20]Although players have an increased incentive to pool when they receive a negative private signal, either a private or public signal result in a negative estimated decline in performance after pooling.

[21]I present results at the monthly level to control for short-term changes in performance linked to the playing environment (e.g. some levels favor hitters versus pitchers), and I assume the player's level of placement, which is decided by the team, reflects the player's proficiency.

4.2 Adoption Timing

To more formally examine the selection of pooling timing, I estimate the dynamic trends of performance surrounding platforming and pooling by estimating the following regression specification:

$$Performance_{i,j,k,m,y} = \beta_0 + \sum_{l=-12}^{12} \beta_l Treat_i \times Post_{(m,y)-l} + \mathbf{X}_{i,j,k,y} + \gamma_i + \delta_{m,y} + \tau_{j,m} + \rho_k + \epsilon_{i,j,k,m,y} \quad (2)$$

Figure 7 shows positive pre-trends in a hitter's plate appearances and Figure 8 shows positive pre-trends in a pitcher's innings pitched preceding pooling.[22] When examining shorter-term changes in performance from only the month prior to pooling, Appendix Table A.5 finds that recent changes in performance have limited relation to the timing of a player's pooling timing providing evidence consistent with the disciplining mechanism of income pools while declines in performance precede a player's decision to platform.[23]

In summary, I document negative estimates of income pooling on playing time and output for both pitchers and hitters, but I find limited evidence of efficiency declines. The presence of a divergence of pre-trends before platforming and pooling, evidenced by an increase in pre-trends preceding time period *t-1* and a decline in time period *t-1* necessitate further causal identification.

4.3 Instrumental Variables Approach

To identify the effect of players pooling on their performance, I exploit individuals' heterogeneous exposure to peers within their network that have platformed with the income pooling company. Due to the violation of parallel trends (suggesting non-random adoption timing), the empirical

[22] Appendix Figures A.7 and A.8 find insignificant pre-trends for pooling hitters' OPS and ERA. Dynamic specifications at the annual level also find evidence of positive pre-trends for a hitter's on-base percentage.

[23] Tables A.4 and A.5 only include players until they decide to platform or pool to reflect their initial decision. Table A.4 displays the results for the timing of a player's platforming decision. Hitters experience a statistically significant decline in the number of plate appearances (column 1) while pitchers have an increased likelihood of injury in the month prior to platforming (column 8).

hurdle is to introduce variation in a player's pooling decision that is independent of an individual player's future performance (e.g. the instrument and outcome of interest do not share any causes) and satisfies the relevance and exclusion restrictions. I propose two instruments based on the lagged proportion of platformed players from a similar location to the focal player (players within the same state for domestic players or same country for international players) and the lagged proportion of platformed players from the focal player's major league affiliate. As instrumental variables provide a local average treatment effect (LATE) for compliers, or those players whose decision to pool is based on exposure to their peers, the benefit of using multiple instruments is to better understand whether heterogeneous treatment effects exist. These instruments are likely to suffice the instrument relevance condition (x $\sim$ z) as the company relies heavily on word of mouth advertising, offers player referral bonuses, and has player pools that tend to be quite homogeneous.

To correct for the non-random adoption into pooling, I instrument for the timing of a player's pooling decision using an instrumental variables framework with the following first stage equation:

$$Treat_i \times Post_{m,y} = \alpha_2 + \beta_2 Instrument_{i,(m,y)-1} + \mathbf{X}_{i,j,k,y} + \gamma_i + \delta_{m,y} + \tau_{j,m} + \rho_k + \epsilon_{i,j,k,m,y} \quad (3)$$

where $Instrument_{i,(m,y)-1}$ is the instrumental variable of interest based on either the proportion of players platforming from a similar location or major league affiliate from the prior month. The second stage regression below identifies the effect of a player pooling.

$$Performance_{i,j,k,m,y} = \alpha_3 + \beta_3 \widehat{Treat_i \times Post}_{m,y} + \mathbf{X}_{i,j,k,y} + \gamma_i + \delta_{m,y} + \tau_{j,m} + \rho_k + \epsilon_{i,j,k,m,y} \quad (4)$$

through either the active proportion of platforming players from within a player's home country or major league affiliate.

4.4 Instrument Relevance

Table 5 provides a formal test of the relevance condition to examine how a player's platforming and pooling decision co-varies with the platforming rate of players from the focal player's birth location or major league affiliate.[24] The inclusion of fixed effects at the time, player, major league affiliate, and month $\times$ level suggests the relationship between the instrument and outcome of interest must be present *conditional* on these levels of demeaning. Columns (1) to (4) display the results for explaining the timing of a player platforming. Column (1) documents that the proportion of players platforming from the same location is highly relevant in explaining an individual player's platforming decision with a first stage F-statistic of nearly 60. A one-standard deviation increase in the instrument of 3 percent increases a player's likelihood of platforming by 3.42 percent which is an effect size larger than the sample platforming rate. The results in column (2) interacts the location instrument with an indicator if a player is domestically born and documents the instrument is slightly stronger for international players. The results in column (3) document that the affiliation instrument is weaker with an F-statistic of about 15. Column (4) documents that international players are significantly more likely to platform in response to their major league affiliate peers' decisions than their American counterparts.

The results in columns (5) to (8) of Table 5 examine the first-stage results in explaining a player's pooling adoption timing. The first-stage estimate in column (5) remains highly relevant in explaining the timing of a player's sign-up decision with a first-stage F-statistic of about 40. The coefficient estimate declines in magnitude by about 50 percent from column (1) suggesting that there is idiosyncratic variation in a player's sign-up decision. Surprisingly, the results in column (7) document an increase in relevance of the affiliation instrument (relative to platforming) with an F-statistic of about 25 which suggests that players are more likely to pool when their affected peers are more proximate. In summary, I document that both the proportion of a focal player's peers

[24] I use the lagged proportion of platforming players from the prior calendar month if a player platforms or pools during the baseball off-season to ensure no look-ahead bias or reverse causality.

from the same geographic area and major league affiliate explain meaningful variation in the focal player's platforming and pooling decision.

4.5 Instrument Exclusion

A valid instrument must also satisfy the exclusion restriction which restricts the impact of the instrument on the outcome of interest through only shifting the covariate of interest. In my context, this identifying assumption would imply that the platforming decision of players from a focal player's home location or major league affiliate do not directly impact a player's future performance *except* through a player's pooling adoption timing. A failure of the exclusion restriction would require that a focal player's past peers (e.g. players from the focal player's home location) or current major league affiliate teammates' decision to platform impacts the focal player's subsequent performance which seems reasonable given the focal player of interest might otherwise be unaware of his peers' platforming decisions.

The exclusion restriction would also be violated if a focal player's peers' decision to platform was correlated with information that was informative of the focal player's future performance (a form of omitted variable bias). The inclusion of rich fixed effects in combination with the shorter nature of the panel (e.g. time-invariant factors are less likely to shift over shorter intervals) makes these exclusion restriction violations less likely but still possible. For example, player fixed effects control for time-invariant factors within a player's home location and month $\times$ year fixed effects capture variation common across all panel units in the same time period. A time-varying shock within a player's home location such as an earthquake in the Dominican Republic which both increased these players' likelihood of platforming (due to a shock to risk-aversion) and signalled a decline in future performance (players shift from allocating resources to their own training and development to their families) would be one such case. While this identifying assumption is ultimately untestable, I provide support for instrumental exclusion based on institutional details and a placebo test for untreated players that face the same time-varying, location-based shocks.

Conceptually, the first instrument based on a player's birth location has the benefit of being exogenous to recent player specific events as a player's birth location is a fixed demographic characteristic. This instrument based on geographic peers' platforming rate is also supported by two institutional details. First, platforming players are often asked to provide a list of players they would be interested in pooling with to facilitate the creation of a pool leading to the relevance of this instrument. Although a player's platforming decision might be correlated with private information about his own recent performance or expected future performance, the private information this player has about his potential choice of pooling partners is likely much weaker. Second, the company hired their first sales person targeting international players in April 2020. For many international players, this hiring significantly increased the salience of pooling (evidenced by a spike in platforming and pooling rates) while also helping to weaken the link between recent changes in performance and the decision to pool.[25]

Table 6 provides a placebo test in support of the exclusion restriction by restricting the analysis to a group of players unaffected by the pooling company but still exposed to time-varying shocks within their birth location. The table regresses performance for Major League Baseball players (players at baseball's highest level–who empirically have no interest in pooling) on the lagged, platforming rate of players from their home country or state.[26] Panel A of Table 6 displays the results for hitters and Panel B for pitchers to examine how changes in the proportion of platforming players impact the unaffected player's performance.[27] Consistent across both panels, I find no relationship between the platforming rate within a player's home location on his performance. This placebo test provides support for the location instrument's excludability and overall that time-varying shocks to a player's home location prompting variation in platforming rates do not

[25]This hiring shock is similar in spirit to health insurance markets which allow sign-ups during a narrow window only once a year to minimize the potential for adverse selection.

[26]Over 99 percent of players platformed before making the Major Leagues.

[27]I construct a discrete shock measure to examine how time-varying changes in platforming prevalence affect performance. The results are robust to using a decile shock measure.

affect a group of players that are exposed to time-varying location shocks but unexposed to the pooling company's activities.

The second instrument is based on the proportion of active platformers within the focal player's major league affiliation. This instrument has the advantage of being immune to time-varying shocks across locations which might impact performance and a player's pooling decision as minor league players are nearly randomly disbursed across major league affiliates by location of origin. Although, there are the potential for some spillover effects from teammates' performance, the exclusion restriction is aided by the fact that baseball is largely an individual rather than team sport and the instrument is computed across all of a major league affiliate's levels rather than just within one team. Table 7 provides another placebo test using the performance of Major League player's performance (who are untreated) on the proportion of platformed players within a Major league affiliation. The results in Panel A of Table 7 for hitters and Panel B for pitchers are all economically insignificant in magnitude while only a pitcher's earned run average (ERA) is estimated to be statistically significant from zero.[28] In summary, both of these peer network identification approaches provide a pathway towards quasi-random, heterogeneous exposure to income pooling adoption which I test more formally in the next section.

5 Main Results

5.1 Instrumental Variable Results

Table 8 presents estimates from the second stage, instrumental variables (IV) in Equation 4 which instruments for the timing of pooling adoption using the proportion of platformed players from the focal player's home location. The results in Panel A for hitters document significant declines in playing time and overall productivity as proxied for through a hitter's plate appearances (column 1)

[28] The expected increase in a player's ERA is economically small as a one standard deviation increase in the affiliation measure results in a two percent increase in a pitcher's ERA relative to the mean.

and runs scored (column 2). The results in column (4) show a statistically significant decline in hitting efficiency (proxied by a hitter's batting average) with an effect size of about one-third of the variable's mean or a one-standard deviation decline. I find insignificant declines in hitting efficiency across several other measures with economically significant coefficient estimates driven by sizable standard errors. The results in columns (7) and (8) document no statistically significant changes in pooling player's likelihood to be promoted or injured after pooling.

Panel B of Table 8 displays the second-stage results for pitchers. The results in columns (1) and (2) find a significant decline in playing time and a pitcher's output proxied for by the number of innings pitched and strikeouts. Columns (3) to (6) find evidence consistent with a decline in pitcher performance. The results in column (4) document an increase in a pitcher's ERA (earned run average) by about 0.6 standard deviation while a pitcher's WHIP (walks and hits per innings pitched) and K/BB (strikeout to walk ratio) have slightly larger increases in economic magnitude. The results in columns (7) and (8) document no statistically significant changes in pooling player's likelihood to be promoted or injured after pooling.[29]

In combination, the results suggest significant declines in performance for both hitters and pitchers when pooling is particularly salient proxied for by a player's past, geographical peers' decisions. As the instrumental variable design provides a local average treatment effect (LATE), it is possible that heterogeneous treatment effects exist as complying players experience different monitoring and information sharing environments. For example, players joining income pools based on the platforming rates of their geographic peers might be more likely to join pools with more distant peers where monitoring the effort of others within the pool is difficult. This lack of monitoring would lead to a greater incentive of complying, pooling players to free-ride and exert less effort following pooling adoption causing future performance declines.[30] Pooling with more

[29]Appendix Table A.6, in Panels A and B, presents comparable results for hitters and pitchers, respectively, following a player's platforming adoption. The coefficient estimates and standard errors decline in magnitude by about 50 percent due to the increased power of the instrument (F-statistic $\approx$ 45).

[30]The Appendix provides a simple model to solve for an individual's level of effort before pooling and after joining an income pool to provide a theoretical motivation for the expected empirical result stemming

distant peers might also lead to smaller benefits of information sharing and emotional connection which would lead to an underestimation of the potential benefits of income pooling stemming from psychological and information benefits.

Table 9 presents estimates from the second stage, instrumental variables (IV) in Equation 4 which instruments for the timing of pooling adoption using the lagged proportion of platformed players from the focal player's major league affiliate. The local average treatment effects presented in Panel A of Table 9 provide suggestive evidence of benefits to income pooling when effective monitoring is present. Hitters experience an insignificant change in playing time after pooling (about one fewer plate appearance). The hitting efficiency measures in columns (3) to (6) experience a one-standard deviation increase after pooling; however the weaker relevance of this instrument makes these estimates marginally insignificant. The results in column (7) show a higher likelihood of promotion after pooling while the results in column (8) find a significant increase in the likelihood of injury.

Panel B of Table 9 documents the effect for pitchers. Comparable to hitters, Column (1) documents that pitchers experience an insignificant change in playing time. In contrast, the pitcher efficiency measures displayed in columns (3) to (6) show economically large declines in pitcher performance with effect sizes around one standard deviation for players after pooling. The results in columns (7) and (8) document economically large increases in the likelihood of promotion and injury, although the weaker relevance of the instrument results in larger standard errors.[31]

Table 10 provides evidence for this increased monitoring channel. The results in columns (1) to (3) show that there is no increased likelihood of a player pooling with a player from his major league affiliate when the focal player's proportion of peers from his home location is increasing. In contrast, columns (4) to (6) find a significant effect of the proportion of players platforming from a focal player's major league affiliate and the maximum proportion of players within a pool from

from diversifying an individual's payout function.

[31] Appendix Table A.7, in Panels A and B, presents comparable results for hitters and pitchers, respectively, following a player's platforming adoption.

the same major league affiliate. The result in column (6) documents that a one-standard deviation increase (two percent increase) in the proportion of players from the focal player's platforming is linked to an increase in the unexpected affiliation percent by about 3 percent or one-tenth of a standard deviation. In comparison, the placebo test in column (3) finds an effect size that is about one-fifth of the magnitude.

5.2 Player Longevity

Thus far, I have documented declines in performance on the intensive margin for players that continue to play following platforming and pooling adoption. The question of how pooling affects a player's career longevity or exit from minor league baseball is also important. For example, income pooling might encourage players to continue playing if another player from their pool succeeds and begins making distributions to the other pooling partners providing additional short-term solvency and liquidity. On the other hand, income pooling might encourage others to shorten their career duration and free-ride if they view their entrance into an income pool as a way to extract value from their risky career pursuit.[32]

Although I am unable to infer the optimal exit timing of minor league baseball players given their career prospects, showing that income pooling is connected with longer career pursuits might provide some counter-evidence to the efficiency declines that follow income pooling. Additionally, finding evidence that pooling leads to declines in player participation at the extensive margin through increased chance of player exit might be efficient at the individual player level but further exacerbate free-riding incentives and efficiency measures overall.

The results are displayed in Table 11 for the likelihood of a player playing in his final month based on his platforming or pooling status. Column (1) documents that platforming players are

[32] In practice, the company only allows players with active baseball tenures or those that involuntary retire due to injury to be eligible for pool distributions. Internet Appendix Figure IA.6 shows more details on the three percent of pooling players that have voluntarily retired from their income pool.

about 2 percent less likely to end their careers in comparison to their non-platforming counterpart. This association is quite economically large as it represents about 25 percent of the sample mean and is likely linked to their initial interest in the pooling product. Additionally, all specifications control for a player's age, level of play, and time fixed effects to better isolate residual variation connected to a player's exit decision. The result in columns (2) examines the endogenous association of whether players are more likely to leave minor league baseball after platforming and finds no effect. The results in columns (3) and (4) instruments for a player's platforming adoption with the lagged location and affiliation instrument, respectively and finds similar null effects.

Columns (5) to (8) of Table 11 examine the attrition of professional baseball players associated with their pooling decision. The results in column (5) document that pooling players have a similar increased longevity relative to their platforming peers with an effect size about 25 percent larger than the sample mean. Similar to platforming, the endogenous effect of pooling adoption timing in column (6) and instrumented effects in columns (7) and (8) find statistically insignificant changes in a player's longevity. The fact that platforming and pooling players are unlikely to leave professional baseball afterwards suggests effective contract design that mitigates an individual's desire to free-ride on the extensive margin by exiting professional baseball completely.

5.3 Pooling Homogeneity

How do players attempt to overcome information asymmetries and free-riding incentives that emerge from income pooling contracts? If minor league baseball players find pooling contracts theoretically optimal, but are aware of potential incentives to free-ride in the presence of incomplete information, players should be more likely to pool with a similar player whose ability and performance are comparable to minimize information asymmetries and free-riding incentives. To empirically test the similarity of the characteristics of pooling players, I compare the average of the standard deviation across the 88 observed income pools to a bootstrapped distribution that computes the average standard deviation from randomly arranging pooling players into pools of the same sizes of the 88 actual pools. I repeat this random sorting of players into pools 10,000 times to generate a bootstrapped distribution in which I can directly compare the observed sample statistic to the distribution one would expect if players randomly pooled.

Figure 9 displays the similarity figures across both player demographic characteristics (e.g. ethnicity, age), player performance (e.g. pre-pooling ERA and OPS), and player characteristics (e.g. position and draft round). The results show that players sort into largely homogeneous pools based on ethnicity and age (p-values of 0.00) as well as position and draft round position.[33] Overall the pre-pooling playing statistics provide evidence of pooling similarity with a p-value of 0.07 for hitter's OPS and 0.05 for pitcher's ERA though the evidence is slightly weaker due to players preferring to pool with friends in spite of small performance differences. In summary, consistent with a player's awareness of the negative incentives created by the pooling contract, I find strong evidence of pooling homogeneity as pooling players seek to mitigate information asymmetries and potential free-riding incentives of accompanying players.

5.4 Covariance of Performance

Although income pooling shifting individual incentives to a common group incentive has the negative cost of incentivizing free-riding, it also has potential benefits in removing player stress or increasing information sharing among players. Of interest, is the impact income pooling has on the covariance of peers' performance to proxy for information sharing or an increased psychological connection. A player's performance might covary with his peers for many endogenous reasons such as players matching based on ability or facing similar difficulty of opponents over time. To overcome this concern, I use a Differences-in-Differences style design which examines the interactive effect of pooling on the covariance of a player's performance with a common pool *after* pooling in comparison

[33]Draft round is set to missing for international players.

to the *pre*-pooling period. Appendix Table A.8 presents the results from examining changes in the covariance of a player's performance with his pooling partners.[34]

The results in column (1) of Appendix Table A.8 find hitters experience an insignificant decline in hitting efficiency performance after pooling similar to the original OLS results. The coefficient estimate Post $\times$ Pool in column (2) represents the increased covariance of pooling players with their pooling partners after pooling. The estimate has an economically large coefficient estimate but is estimated to be statistically significant due to larger standard errors. For reference, a 1 percent increase in the pool's OPS is associated with a 0.91 percent increase in an individual player's OPS. The results in column (4) document similarly statistically insignificant changes in the covariance of pitcher's performance with their pool although the coefficient estimate is of a similar magnitude.[35]

5.5 Pool Size

Connected to the expected payoffs to pooling and the mitigation of risk, Appendix Table A.10 examines the relationship between the pool size a player ultimately joins and his characteristics. The results in column (1) documents that players drafted from junior college are significantly more likely to join a smaller pool in comparison to drafted players from college and that younger players pool in smaller pools providing mixed evidence of rational pooling choice. The first result that college players are more likely to join larger pools is consistent with these players having a smaller chance of succeeding while younger players joining smaller pools is inconsistent with diversifying the high risk that many of these players face. The results in columns (2) and (3) subset a regression down into hitters for column (2) to document U.S. born hitters are more likely to pool with a larger number of people while the results for pitchers in column (3) find player characteristics to be largely

[34]For players that do not pool, the measure of performance for a particular month is set to the aggregate performance of non-pooling players.

[35]Appendix Table A.9 provides comparable estimates from regressing a pooling player's performance on either a pooling partner or counterfactual player who joined a different income pool. I find similar effects of an insignificant increase in the covariance of a player's performance on his pooling partners after pooling.

uninformative in a player's pooling size choice.

6 Discussion

External validity is an important aspect of my analysis, since it is important to assess to what extent characteristics of players affected by the introduction of income pooling and the institutional context in professional baseball might contribute to the effects I document. Professional baseball is a setting in which tournament incentives and idiosyncratic risk are both quite large. These features create a labor market in which income pooling has particular appeal and large theoretical benefits to help players mitigate undiversified risk.

In regards to tournament incentives, professional baseball has quite large pay variance relative to the average profession. The average minor league baseball player earns about $25,000 annually while the average Major League baseball player earns over $4 million annually. Figure 10 plots the income distributions across four occupations (actors, lawyers, physicians, and teachers) over time using Census Cohorts for comparability tracking a representative sample of individuals beginning in the 1980 Census between the ages of 25-30. This figure motivates the fact that tournament incentives exist across many common high-skill professions–driven by whether a lawyer is able to make partner at his or her firm, a physician receives a more prestigious residency, or a company middle manager ascends to the role of CEO.

The generalizability of the idiosyncratic risk in other professions is more difficult to address. In professional baseball, about ten percent of minor league players ever make the major leagues. Even when conditioning on being one of the players drafted in the draft's top round (one of the nation's top 40 players), only 65 percent of these players make it to the Major Leagues. (Guvenen et al., 2021) uses a representative sample of Social Security wage filings for men and documents significant skewness in the labor income growth rate with the top one percent experiencing an increase in labor income of 27.9-fold from ages 25-55 (relative to a 5 fold shock for the 95th percentile). For younger individuals, this idiosyncratic risk surrounding their income path is especially large considering that university admission and occupational choice might still be uncertain.

Holding productivity constant, the utility gains to income pooling individuals are strictly positive. Throughout the paper, I find estimates of pooling effects that are typically negative with some mixed evidence of pooling for hitters pooling in times of high pooling salience driven by their major league affiliate teammates' platforming rate. As an individual's level of risk-aversion increases, the utility benefits to pooling might still exist despite estimated declines in performance. Additionally, pooling theoretically has larger benefits in the market of occupational choice if the presence of pooling induces risk-averse individuals to choose more optimal occupations with greater risk. Within labor markets there is widespread endogenous sorting between individuals' level of risk-aversion and their occupational choice (e.g. more risk-averse individuals pursue "safer" occupations). To the degree to which income pooling breaks this link between risk-aversion and occupational choice, income pooling might provide its largest benefit not through a within-job productivity shock but rather its solution to a more optimal allocation of human capital within the economy.

7 Conclusion

Diversification has been one of the most important principles of modern finance. In contrast, individuals' largest source of wealth, their labor income stemming from their human capital, remains largely undiversified. Historically, only public, government sponsored forms of labor insurance have been offered providing an inflexible form of insurance through unemployment insurance funded through an inefficient tax on employment.

In this paper, I study how the imposition of private labor market insurance affects worker productivity, longevity, and features such as selection into these contracts. This paper uses data from a novel setting in professional baseball where players agree to pool their future income– providing a form of labor market insurance through the diversification of their labor income streams.

I provide evidence for negative selection into pooling and declines in productivity that follow pooling. Importantly, this labor setting provides granular measurements of productivity and clear measures of player ability. While professional baseball features larger tournament incentives than most occupations, these results provide generalizability of the impact of allowing individuals to diversify their labor income risk across a variety of labor settings in which income variability is present.

Individuals entering into labor insurance markets are negatively selected and time their sign-up around periods of increasing (decreasing) long- (short-) term performance. Interestingly, players are significantly more likely to be injured in the month preceding them expressing interest while this likelihood is eroded around a player's pooling timing suggesting the disciplining mechanism of the pooling process. Pooling individuals appear to be more sophisticated given the prevalence of college players, and the product is also common among international players with low downside protection and domestic players with lower draft signing bonuses. I find evidence of declining performance among players consistent with free-riding incentives that emerge from reducing an individual's pay-to-performance sensitivity. Notably, these performance decline results are strongest among individuals that sign up with more distant peers with sign-up driven by major league affiliate teammates attenuating these performance declines.

The homogeneity of player pooling within labor insurance markets provides evidence of an awareness and desire of players to mitigate the information asymmetries and free-riding incentives that emerge from labor market insurance. This paper provides the first empirical evidence of a private labor insurance market and its appeal to workers, impact on productivity, and the diversification of risk by individuals. I document that a lack of monitoring leads to free-riding incentives to dominate and productivity declines. Quantifying the improvement in human capital allocation across the economy following the imposition of income pooling and individual's utility functions based on their income paths represents an impactful area of future research.

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Figure 1: Expressing Interest and Joining Income Pools

This figure shows the number of players expressing interest and joining an income pooling agreement. The data runs from October 2017 to April 2023.

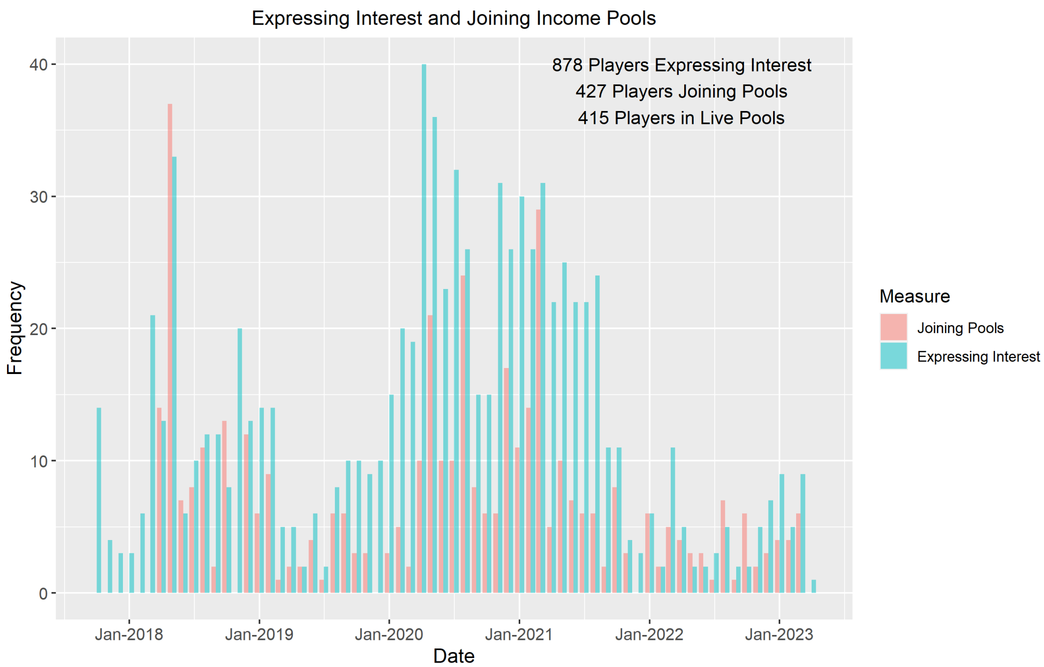

Figure 2: Pooling Choice Heterogeneity

This figure shows the distribution of pooling partner characteristics within a given pool computed as the average of the standard deviation within each pool across the data.

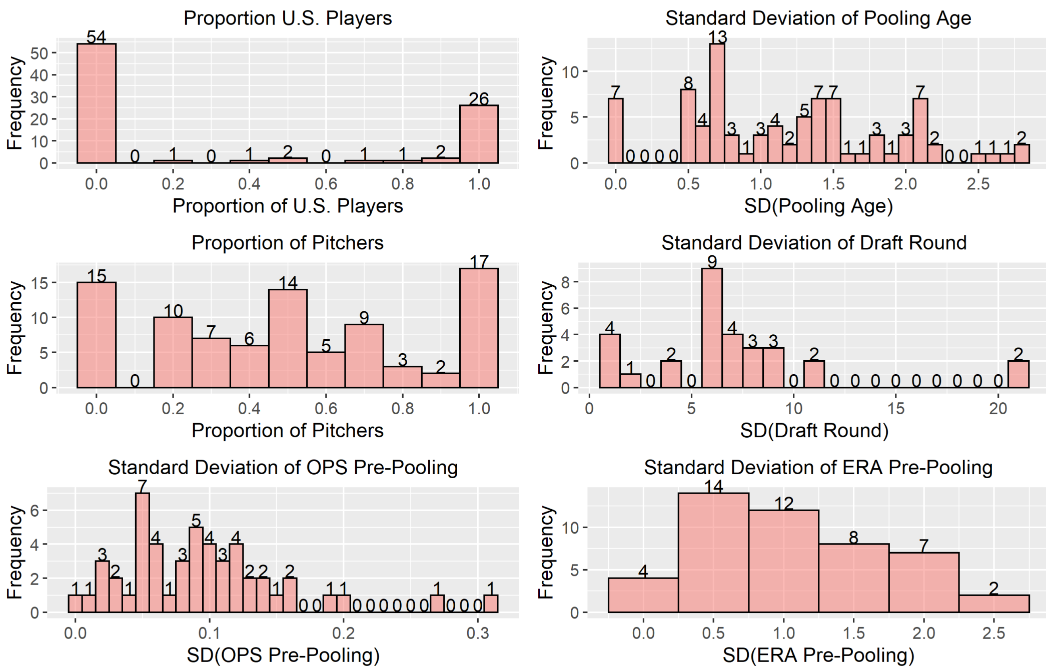

Figure 3: Expressing Interest and Joining Income Pools by Birth Location
This figure shows the number of players expressing interest and joining an income pooling agreement by a player's birth location. Birth locations are set to the individual state for U.S. players and countries for international players. The data runs from October 2017 to April 2023. Locations are shown where at least 10 players have platformed by the end of the sample.

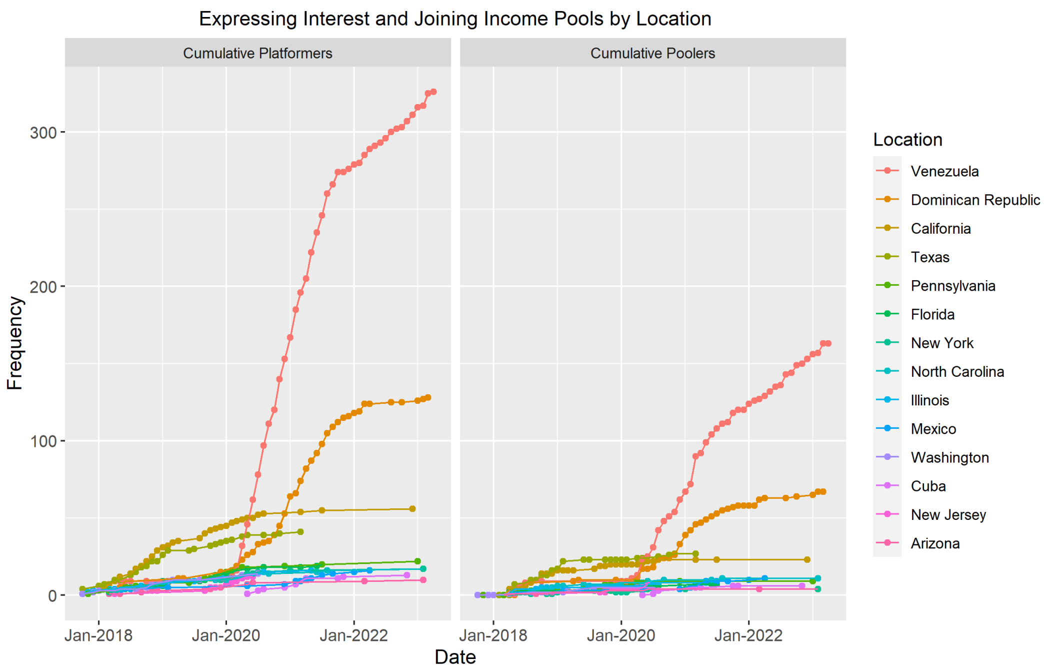

Figure 4: Expressing Interest and Joining Income Pools by Major League Affiliate
This figure shows the number of players expressing interest and joining an income pooling agreement by Major League affiliation. The data runs from October 2017 to April 2023.

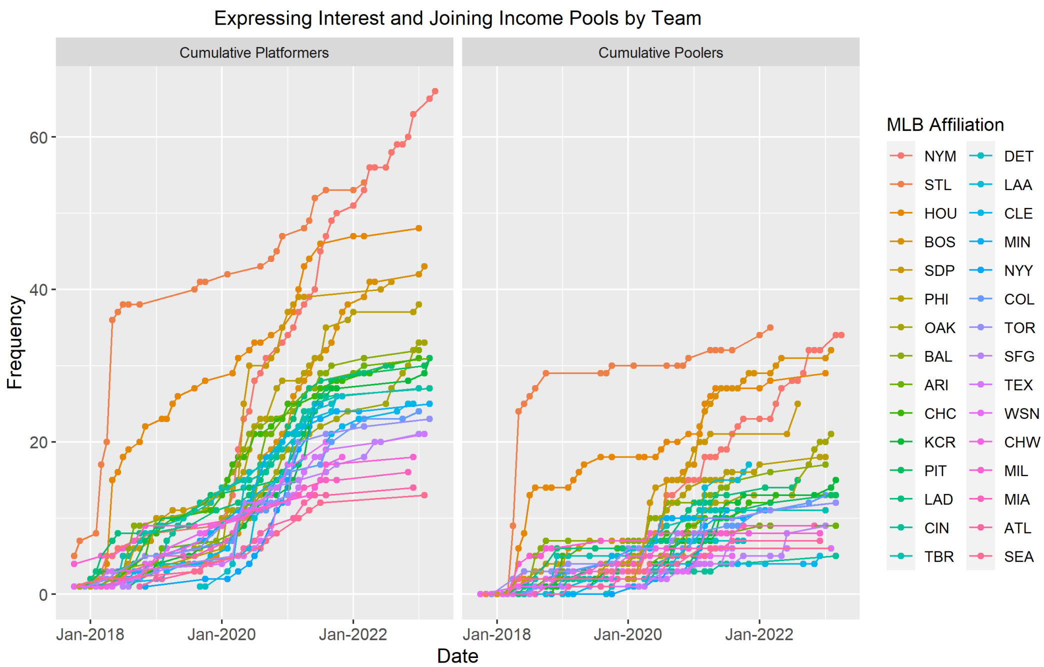

Figure 5: *t*-Statistic from Monthly OLS Regression on Hitter Statistics
This figure shows the t-statistic from a monthly OLS regression surrounding a hitter's platform and pooling dates.

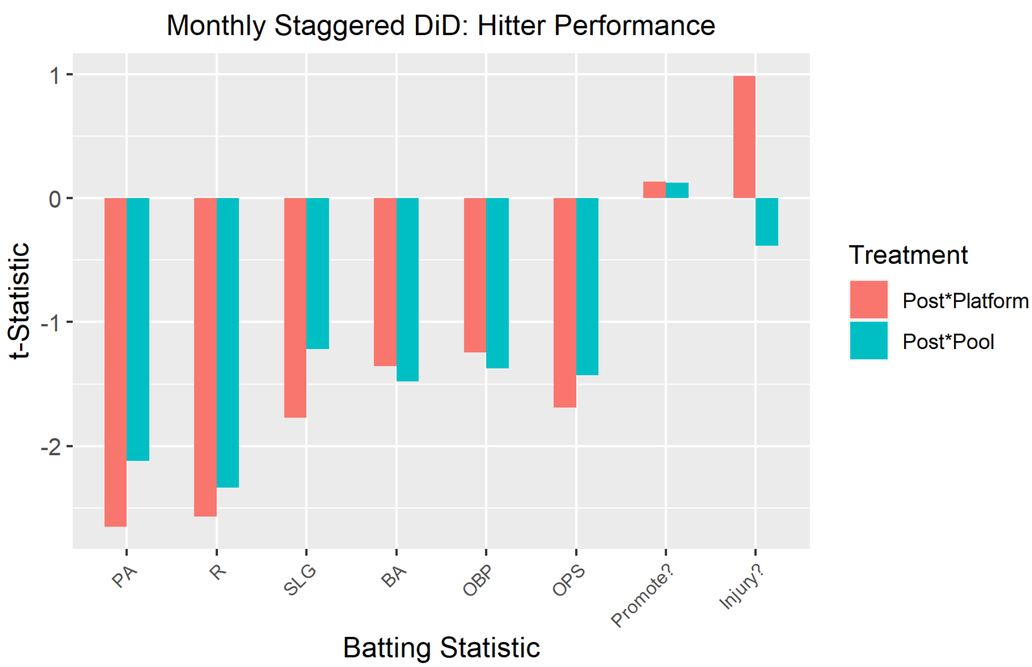

Figure 6: *t*-Statistic from Monthly OLS Regression on Pitcher Statistics

This figure shows the t-statistic from a monthly OLS regression surrounding a pitcher's platform and pooling dates.

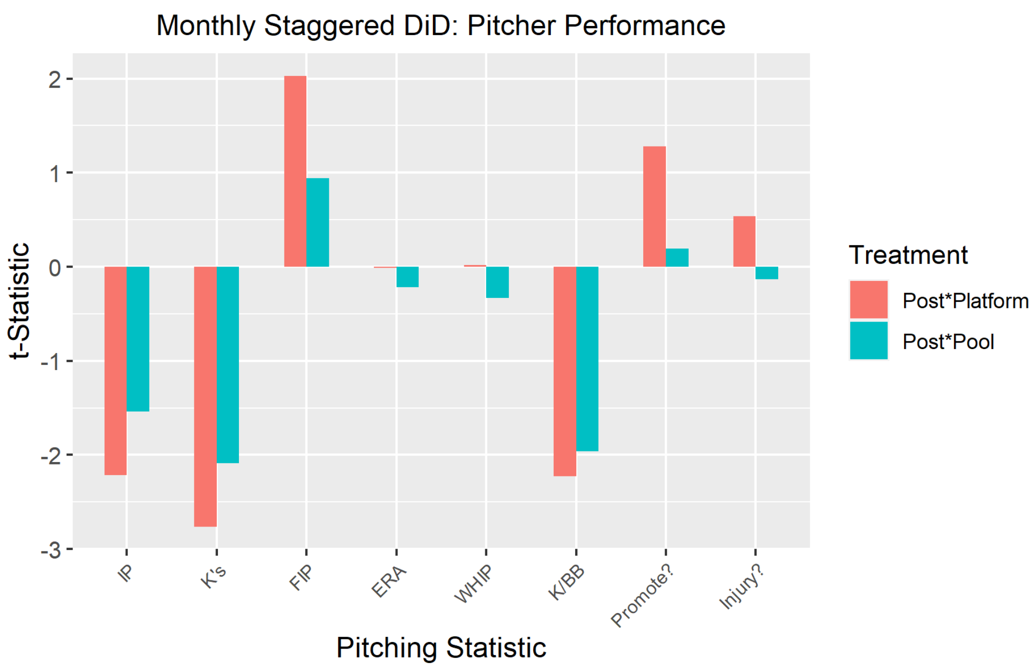

Figure 7: Dynamic Plate Appearances Surrounding Platforming and Pooling

This figure shows the coefficient from a dynamic, monthly OLS regression on a hitter's monthly plate appearances surrounding his platforming and pooling dates.

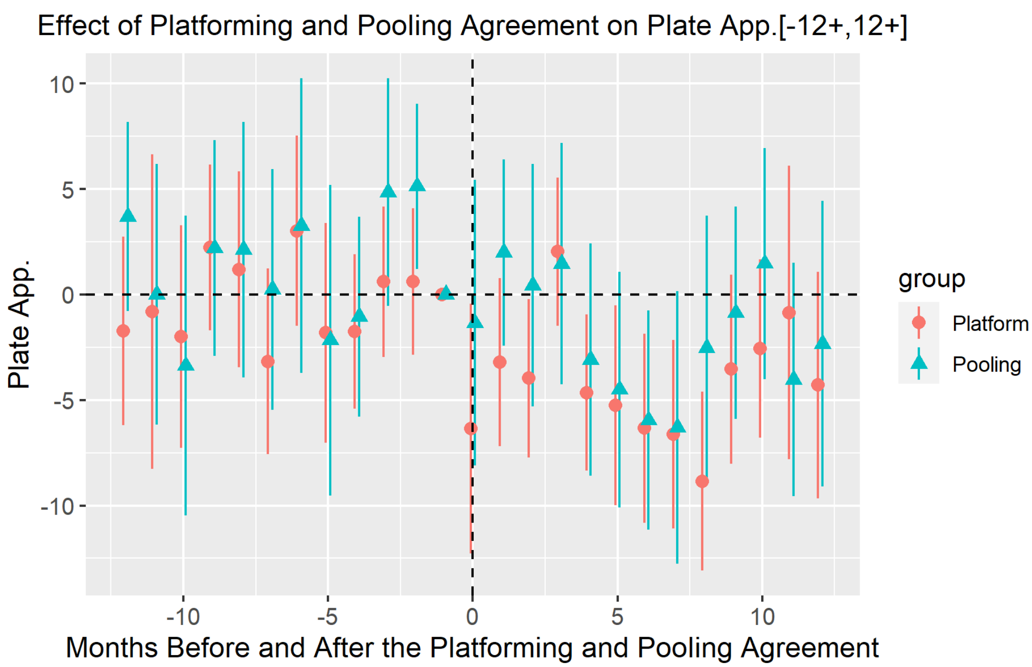

Figure 8: Dynamic Innings Pitched Surrounding Platforming and Pooling
This figure shows the coefficient from a dynamic, monthly OLS regression on a pitcher's monthly innings pitched surrounding his platforming and pooling dates.

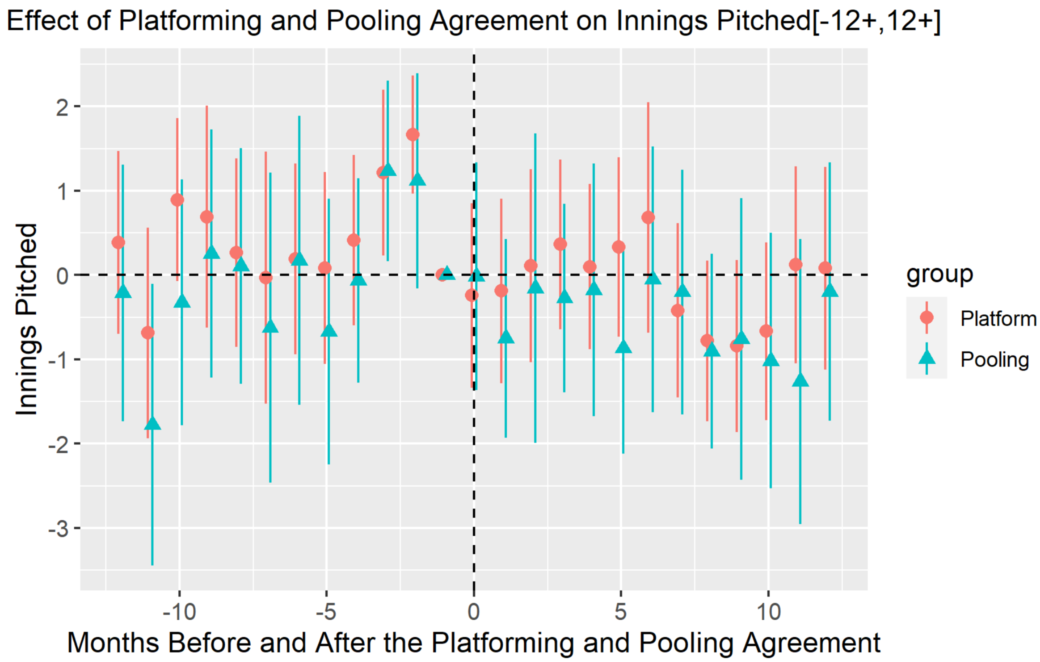

Figure 9: Pooling Choice Heterogeneity

This figure shows the distribution of pooling partners within a given pool computed as the average of the standard deviation within each pool. The dotted line displays the average of the standard deviation within the data across the 88 pools while the histogram is an empirical bootstrap that randomly sorts players that join pooling agreements into different pools.

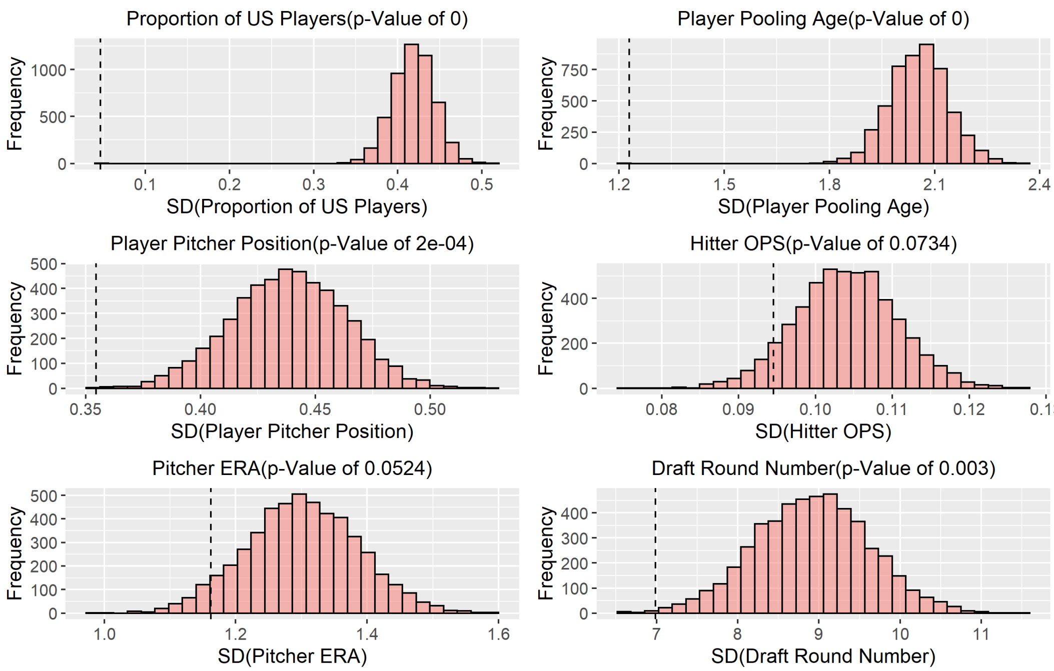

Figure 10: Occupation Salary Path

This figure shows a histogram of earnings across Census cohorts for actors, lawyers, doctors, and teachers. The x-axis denotes the Census year and age cohort. Data on actors is only available after 2000.

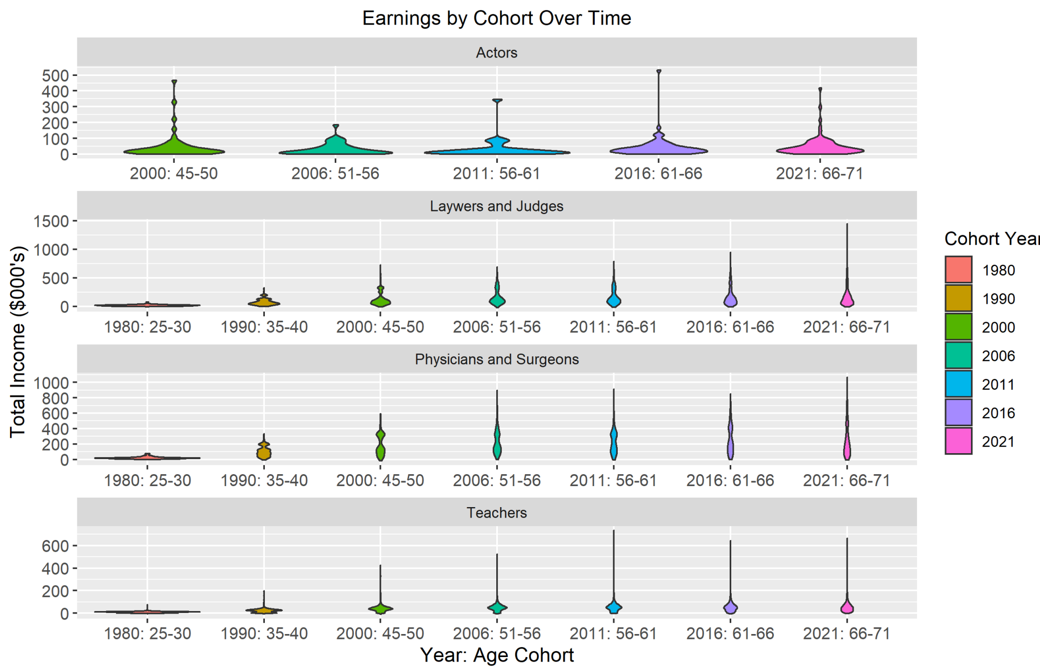

Table 1: Characteristic Comparison Across Platformers and Non-Platformers
This table reports the mean, median, and standard deviation across player characteristics for players that sign a platforming agreement and those that do not. Playing statistics are based upon a player's statistics before platforming. Players are included in the sample if their last year as a professional baseball player is after 2016 and they had not made the major leagues by the end of 2016. ***, **, * correspond to statistical significance at the 1%, 5%, and 10% level, respectively. The Appendix provides detailed variable descriptions.

	Platformers (N = 864)			Non-Platformers (N = 18,174)			Difference
	Mean	Median	SD	Mean	Median	SD	Mean
Timing Characteristics							
First Year Pro	2017.40	2018.00	2.19	2016.78	2017.00	3.70	0.62***
Last Year Pro	2021.33	2022.00	1.62	2020.43	2022.00	2.37	0.90***
Make MLB?	0.07	0.00	0.26	0.08	0.00	0.28	-0.01
First Year MLB	2020.66	2021.00	1.37	2019.61	2020.00	1.82	1.05***
Age First Year Pro	19.69	19.00	2.19	19.98	20.00	2.13	-0.29***
Age First Year MLB	25.87	26.00	2.27	25.19	25.00	2.20	0.68*
Years Pro to MLB	5.16	5.00	1.79	4.98	5.00	2.00	0.18
Age	19.23	19.00	2.23	19.75	20.00	2.35	-0.52***
Player Characteristics							
US Origin?	0.40	0.00	0.49	0.48	0.00	0.50	-0.08***
Pitcher?	0.52	1.00	0.50	0.55	1.00	0.50	-0.03
Drafted?	0.36	0.00	0.48	0.44	0.00	0.50	-0.08***
Undrafted?	0.13	0.00	0.33	0.15	0.00	0.36	-0.03
Draft Characteristics							
Round Number	19.33	19.00	10.38	15.41	14.00	10.61	3.92***
Overall Pick	581.70	585.50	311.57	464.14	415.00	319.62	117.56***
Bonus($100,000's)	2.09	1.22	4.32	5.56	1.74	9.49	-3.46***
Attend College?	0.37	0.00	0.48	0.37	0.00	0.48	0.01
Drafted High School	0.07	0.00	0.26	0.20	0.00	0.40	-0.13***
Drafted Junior College	0.05	0.00	0.22	0.09	0.00	0.28	-0.04**
Drafted College	0.88	1.00	0.33	0.70	1.00	0.46	0.17***
Minor League Characteristics							
1st Season Begin Level	1.16	1.00	0.46	1.25	1.00	0.67	-0.10***
1st Season End Level	1.34	1.00	0.73	1.48	1.00	0.93	-0.13***
2nd Season Begin Level	1.92	1.00	1.19	2.10	1.00	1.25	-0.18***
2nd Season End Level	2.10	1.00	1.38	2.24	2.00	1.43	-0.14**
3rd Season Begin Level	2.70	3.00	1.47	2.86	3.00	1.52	-0.16**
3rd Season End Level	2.85	3.00	1.67	3.01	3.00	1.72	-0.16*
Average OPS	0.70	0.70	0.11	0.66	0.67	0.12	0.04***
Average PA	203.43	188.88	94.05	186.95	167.17	105.13	16.48***
Average ERA	4.02	3.66	2.13	5.04	4.29	3.33	-1.02***
Average Innings Pitched	40.97	38.40	20.09	37.19	32.74	22.99	3.79***
Platform Characteristics							
Time to Platform	2.75	2.00	1.87	-	-	-	-
Platform Age	22.20	22.00	2.34	-	-	-	-

Table 2: Characteristic Comparison Across Poolers and Platformers

This table reports the mean, median, and standard deviation across player characteristics for players that sign a pooling agreement and those that only platform. Playing statistics are based upon a player's statistics before platforming. Players are included in the sample if their last year as a professional baseball player is after 2016 and they had not made the major leagues by the end of 2016. ***, **, * correspond to statistical significance at the 1%, 5%, and 10% level, respectively. The Appendix provides detailed variable descriptions.

	Poolers (N = 425)			Platformers (N = 439)			Difference
	Mean	Median	SD	Mean	Median	SD	Mean
Timing Characteristics							
First Year Pro	2017.56	2017.00	2.04	2017.24	2018.00	2.32	0.32*
Last Year Pro	2021.26	2022.00	1.69	2021.40	2022.00	1.55	-0.14
Make MLB?	0.06	0.00	0.24	0.08	0.00	0.27	-0.02
First Year MLB	2020.69	2021.00	1.05	2020.64	2021.00	1.57	0.05
Age First Year Pro	19.69	19.00	2.22	19.69	19.00	2.17	-0.00
Age First Year MLB	25.23	25.00	1.99	26.33	26.00	2.38	-1.10
Years Pro to MLB	4.77	4.50	1.56	5.44	5.00	1.92	-0.68
Age	19.19	18.00	2.16	19.27	19.00	2.30	-0.09
Player Characteristics							
US Origin	0.38	0.00	0.49	0.42	0.00	0.49	-0.04
Pitcher	0.52	1.00	0.50	0.52	1.00	0.50	0.01
Drafted?	0.35	0.00	0.48	0.38	0.00	0.49	-0.03
Undrafted	0.12	0.00	0.32	0.13	0.00	0.34	-0.02
Draft Characteristics							
Round Number	21.23	21.00	10.29	17.65	17.00	10.20	3.58**
Overall Pick	638.58	634.00	309.22	531.64	504.00	305.87	106.94**
Bonus($100,000's)	1.36	0.89	2.14	2.63	1.29	5.34	-1.27*
Attend College?	0.36	0.00	0.48	0.38	0.00	0.49	-0.02
Drafted High School	0.04	0.00	0.20	0.10	0.00	0.30	-0.05
Drafted Junior College	0.04	0.00	0.20	0.06	0.00	0.24	-0.02
Drafted College	0.92	1.00	0.27	0.84	1.00	0.36	0.07*
Minor League Characteristics							
1st Season Begin Level	1.11	1.00	0.32	1.20	1.00	0.56	-0.10**
1st Season End Level	1.28	1.00	0.61	1.40	1.00	0.83	-0.12*
2nd Season Begin Level	1.84	1.00	1.12	2.01	1.00	1.25	-0.17*
2nd Season End Level	2.04	1.00	1.25	2.16	1.00	1.49	-0.11
3rd Season Begin Level	2.69	3.00	1.41	2.71	3.00	1.53	-0.03
3rd Season End Level	2.84	3.00	1.59	2.86	3.00	1.74	-0.02
Average OPS	0.70	0.70	0.12	0.70	0.70	0.10	-0.00
Average PA	190.00	180.00	86.26	216.46	200.75	99.52	-26.46**
Average ERA	3.90	3.58	2.16	4.15	3.79	2.09	-0.25
Average Innings Pitched	40.11	37.30	18.96	41.83	40.10	21.14	-1.72
Platform Characteristics							
Time to Platform	2.42	2.00	1.66	3.06	3.00	2.00	-0.64***
Platform Age	21.90	22.00	2.20	22.50	23.00	2.44	-0.59***
Pooling Characteristics							
Days to Pool	63.56	17.00	116.31	-	-	-	-
Time to Pool	2.57	2.00	1.67	-	-	-	-
Pooling Age	22.08	22.00	2.28	-	-	-	-

Table 3: Player Platform Decision

This table reports the OLS regression coefficients for regressing a minor league baseball player's decision to platform and pool cross-sectionally on his characteristics. Regressions include major league affiliation and first-year fixed effects. For interpretability, platform and pooling indicators are scaled as a percent. Standard errors are clustered at the affiliation and a player's first professional year. Players are included in the regression if their last year as a professional baseball player is after 2016 and they had not made the major leagues by the end of 2016. ***, **, * correspond to statistical significance at the 1%, 5%, and 10% level, respectively. The Appendix provides detailed variable descriptions.

	Platform?			Pool?		
Sample	All	Hitters	Pitchers	All	Hitters	Pitchers
	(1)	(2)	(3)	(4)	(5)	(6)
Round Number	0.04	0.10*	0.06	0.05**	0.09**	0.04*
	[0.03]	[0.05]	[0.04]	[0.02]	[0.04]	[0.02]
Bonus	-0.12***	-0.18***	-0.16***	-0.05***	-0.06**	-0.08***
	[0.03]	[0.05]	[0.04]	[0.01]	[0.02]	[0.01]
Drafted HS	0.95	-0.74	0.60	0.23	0.47	-0.03
	[1.02]	[2.85]	[1.07]	[0.61]	[1.80]	[0.82]
Drafted JC	0.45	-3.70	1.41	-0.15	-1.51	0.53
	[0.98]	[2.85]	[1.31]	[0.47]	[1.77]	[0.77]
Drafted College	2.53**	-0.37	1.93	1.10*	0.50	0.95
	[0.96]	[2.44]	[1.08]	[0.59]	[1.58]	[0.78]
Pitcher	-0.50***			-0.24		
	[0.14]			[0.21]		
Average OPS		14.23***			7.22**	
		[3.51]			[2.92]	
Average PA		0.07*			0.02	
		[0.03]			[0.02]	
Average ERA			-0.35**			-0.25**
			[0.14]			[0.08]
Average IP			0.37***			0.19***
			[0.09]			[0.06]
Observations	18929	8563	10351	18929	8563	10351
R^2	0.05	0.09	0.06	0.04	0.05	0.05
Affiliation F.E.	Yes	Yes	Yes	Yes	Yes	Yes
First Year F.E.	Yes	Yes	Yes	Yes	Yes	Yes
Cluster S.E.	Yes	Yes	Yes	Yes	Yes	Yes
Y-Mean	4.54	4.81	4.31	2.23	2.36	2.14
Y-SD	20.81	21.40	20.31	14.78	15.18	14.46

Table 4: Effect of Pooling on Performance

This table reports the OLS regression coefficients for regressing a minor league baseball player's pooling timing on his performance statistics. Panel A displays results for hitters and Panel B displays results for pitchers. Regressions include player, month × year, month × level, Major League affiliation, and player age fixed effects. Standard errors are additively clustered at the player and year × month levels. Players are included in the regression if their last year as a professional baseball player is after 2016 and they had not made the major leagues by the end of 2016.

	Panel A: Hitter Monthly Performance							
	PA	R	SLG	BA	OBP	OPS	Promote?	Injury
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Post × Pool	-3.55**	-0.64**	-0.01	-0.01	-0.01	-0.01	0.00	-0.00
	[1.68]	[0.28]	[0.01]	[0.00]	[0.00]	[0.01]	[0.01]	[0.01]
Observations	118021	118021	117845	117845	117912	117845	118021	118021
R^2	0.58	0.45	0.22	0.18	0.18	0.19	0.17	0.11
Player F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Month × Year F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Month × Level F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Affiliation F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cluster S.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Y-Mean	59.35	7.27	0.35	0.24	0.32	0.68	0.07	0.05
Y-SD	33.88	5.22	0.14	0.08	0.08	0.20	0.26	0.23
Pool Mean	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Pool SD	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
	Panel B: Pitcher Monthly Performance							
	IP	K's	FIP	ERA	WHIP	K/BB	Promote?	Injury
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Post × Pool	-0.60	-0.79**	0.10	-0.04	-0.01	-0.20*	0.00	0.00
	[0.39]	[0.38]	[0.11]	[0.17]	[0.02]	[0.10]	[0.01]	[0.01]
Observations	126275	126275	126092	126092	126092	116770	126275	126275
R^2	0.51	0.44	0.22	0.16	0.19	0.25	0.18	0.11
Player F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Month × Year F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Month × Level F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Affiliation F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cluster S.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Y-Mean	12.05	11.64	0.70	4.28	1.43	2.84	0.08	0.05
Y-SD	7.55	7.31	1.87	3.26	0.54	1.98	0.28	0.22
Pool Mean	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Pool SD	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10

Table 5: Player Platform and Pooling Decision Instrumented

This table reports the OLS regression coefficients for regressing a minor league baseball player's decision to platform and pool on the lagged proportion of his peers from the same location or players within the same organization that have platformed. Location is defined within the same state for domestic players or same country for international players. Regressions include player, month × year, month × level, Major League affiliation, and player age fixed effects. Standard errors are additively clustered at the player and year × month levels. Players are included in the regression if their last year as a professional baseball player is after 2016 and they had not made the major leagues by the end of 2016.

	Post Platform?				Post Pool?			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Platform Location Instrument$_{t-1}$	1.14***	1.21***			0.56***	0.59***		
	[0.15]	[0.16]			[0.09]	[0.10]		
US Origin$_i$ × Platform Location Instrument$_{t-1}$		-0.26*				-0.13		
		[0.15]				[0.09]		
Platform Affiliation Instrument$_{t-1}$			0.73***	1.15***			0.57***	0.81***
			[0.19]	[0.22]			[0.12]	[0.15]
US Origin$_i$ × Platform Affiliation Instrument$_{t-1}$				-0.78***				-0.46***
				[0.14]				[0.11]
Observations	247327	247208	247327	247208	247327	247208	247327	247208
R^2	0.61	0.62	0.61	0.61	0.60	0.60	0.59	0.59
Player F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Month × Year F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Month × Level F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Location F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Affiliation F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cluster S.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Y-Mean	0.02	0.02	0.02	0.02	0.01	0.01	0.01	0.01
Y-SD	0.14	0.14	0.14	0.14	0.10	0.10	0.10	0.10
Instrument Mean	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Instrument SD	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
F-Statistic	57.53		14.44		39.33		22.65	

Table 6: Exclusion Restriction: Location Shocks and MLB Short-term Performance This table reports the coefficient estimates from a placebo test for regressing MLB player's performance (untreated players) on changes in the proportion of players platforming from the same location. The changes in the instrument are ranked into quartiles within each month × year. Panel A displays results for hitters and Panel B displays results for pitchers. Regressions include player, month × year, month × level, Major League affiliation, and player age fixed effects. Standard errors are additively clustered at the player and year × month levels. Players are included in the regression if their last year as a professional baseball player is after 2016 and they had not made the major leagues by the end of 2016.

	Panel A: Hitter Monthly Performance							
	PA	R	SLG	BA	OBP	OPS	Promote?	Injury
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Location Quartile Shock	-0.03	0.04	0.00	0.00	-0.00	0.00	0.00	0.00
	[0.47]	[0.09]	[0.00]	[0.00]	[0.00]	[0.00]	[0.00]	[0.00]
Observations	4927	4927	4908	4908	4917	4908	4927	4927
R^2	0.43	0.40	0.27	0.25	0.23	0.25	0.95	0.17
Player F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Month × Year F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Month × Level F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Affiliation F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cluster S.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Y-Mean	86.91	11.10	0.39	0.24	0.31	0.71	0.22	0.11
Y-SD	29.74	5.43	0.13	0.07	0.07	0.18	0.41	0.32
Shock Mean	1.73	1.73	1.73	1.73	1.73	1.73	1.73	1.73
Shock SD	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13
	Panel B: Pitcher Monthly Performance							
	IP	K's	FIP	ERA	WHIP	K/BB	Promote?	Injury
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Location Quartile Shock	0.07	0.10	0.02	0.01	-0.00	0.03	0.00	0.00
	[0.08]	[0.09]	[0.03]	[0.06]	[0.01]	[0.03]	[0.00]	[0.00]
Observations	6127	6127	6115	6115	6115	5606	6180	6180
R^2	0.63	0.59	0.23	0.20	0.23	0.27	0.95	0.17
Player F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Month × Year F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Month × Level F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Affiliation F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cluster S.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Y-Mean	11.25	10.89	1.33	4.66	1.44	2.80	0.26	0.11
Y-SD	8.08	7.86	2.05	3.44	0.56	1.90	0.44	0.31
Shock Mean	1.69	1.69	1.69	1.69	1.69	1.69	1.68	1.68
Shock SD	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11

Table 7: Exclusion Restriction: Affiliation Shocks and MLB Short-term Performance This table reports the coefficient estimates from a placebo test for regressing MLB player's performance (untreated players) on changes in the proportion of players platforming from the same Major League affiliates. The changes in the instrument are ranked into quartiles within each month × year. Panel A displays results for hitters and Panel B displays results for pitchers. Regressions include player, month × year, month × level, Major League affiliation, and player age fixed effects. Standard errors are additively clustered at the player and year × month levels. Players are included in the regression if their last year as a professional baseball player is after 2016 and they had not made the major leagues by the end of 2016.

	Panel A: Hitter Monthly Performance							
	PA	R	SLG	BA	OBP	OPS	Promote?	Injury
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Affiliation Quartile Shock	-0.02	-0.03	0.00	0.00	0.00	0.00	-0.00	0.00
	[0.26]	[0.06]	[0.00]	[0.00]	[0.00]	[0.00]	[0.00]	[0.00]
Observations	5152	5152	5131	5131	5140	5131	5152	5152
R^2	0.44	0.40	0.28	0.25	0.24	0.26	0.94	0.17
Player F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Month × Year F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Month × Level F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Affiliation F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cluster S.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Y-Mean	86.99	11.13	0.39	0.24	0.31	0.71	0.22	0.12
Y-SD	29.75	5.43	0.13	0.07	0.07	0.18	0.42	0.32
Shock Mean	2.11	2.11	2.11	2.11	2.11	2.11	2.11	2.11
Shock SD	1.21	1.21	1.21	1.21	1.21	1.21	1.21	1.21
	Panel B: Pitcher Monthly Performance							
	IP	K's	FIP	ERA	WHIP	K/BB	Promote?	Injury
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Affiliation Quartile Shock	0.02	0.04	-0.00	0.09**	0.01	0.02	-0.00	0.00
	[0.06]	[0.07]	[0.02]	[0.04]	[0.01]	[0.02]	[0.00]	[0.00]
Observations	6481	6481	6471	6471	6471	5933	6562	6562
R^2	0.63	0.59	0.23	0.20	0.23	0.27	0.95	0.17
Player F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Month × Year F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Month × Level F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Affiliation F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cluster S.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Y-Mean	11.34	11.00	1.31	4.64	1.43	2.83	0.25	0.11
Y-SD	8.10	7.86	2.04	3.42	0.55	1.90	0.43	0.32
Shock Mean	2.10	2.10	2.10	2.10	2.10	2.10	2.10	2.10
Shock SD	1.21	1.21	1.21	1.21	1.21	1.21	1.21	1.21

Table 8: IV Effect of Pooling on Performance: Location Instrument

This table reports the IV regression coefficients for regressing a minor league baseball player's pooling timing on his performance. Panel A displays results for hitters and Panel B displays results for pitchers. Pooling timing is instrumented for by the lagged proportion of platformed players from a domestic player's home state or an international player's home country. Regressions include player, month × year, month × level, Major League affiliation, and player age fixed effects. Standard errors are additively clustered at the player and year × month levels. Players are included in the regression if their last year as a professional baseball player is after 2016 and they had not made the major leagues by the end of 2016.

	Panel A: IV Hitter Monthly Performance							
	PA	R	SLG	BA	OBP	OPS	Promote?	Injury
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Post × Pool	-45.82*	-8.03*	-0.13	-0.08*	-0.03	-0.16	0.16	-0.10
	[26.71]	[4.05]	[0.08]	[0.04]	[0.04]	[0.12]	[0.16]	[0.12]
Observations	118066	118066	117889	117889	117957	117889	118066	118066
Player F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Month × Year F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Month × Level F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Affiliation F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cluster S.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Instrument	Loc.	Loc.	Loc.	Loc.	Loc.	Loc.	Loc.	Loc.
F-Statistic	22.94	22.94	22.84	22.84	22.85	22.84	22.94	22.94
Y-Mean	59.35	7.27	0.35	0.24	0.32	0.68	0.07	0.05
Y-SD	33.88	5.22	0.14	0.08	0.08	0.20	0.26	0.23
Pool Mean	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Pool SD	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
	Panel B: IV Pitcher Monthly Performance							
	IP	K's	FIP	ERA	WHIP	K/BB	Promote?	Injury
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Post × Pool	-12.87**	-10.76**	0.62	1.91*	0.41**	-1.90**	0.01	0.08
	[4.99]	[4.87]	[0.70]	[1.11]	[0.19]	[0.83]	[0.12]	[0.09]
Observations	126194	126194	126011	126011	126011	116697	126194	126194
Player F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Month × Year F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Month × Level F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Affiliation F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cluster S.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Instrument	Loc.	Loc.	Loc.	Loc.	Loc.	Loc.	Loc.	Loc.
F-Statistic	29.35	29.35	29.29	29.29	29.29	27.81	29.35	29.35
Y-Mean	12.05	11.64	0.70	4.28	1.43	2.84	0.08	0.05
Y-SD	7.55	7.31	1.87	3.26	0.54	1.98	0.28	0.22
Pool Mean	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Pool SD	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10

Table 9: IV Effect of Pooling on Performance: Affiliation Instrument

This table reports the IV regression coefficients for regressing a minor league baseball player's pooling timing on his performance. Panel A displays results for hitters and Panel B displays results for pitchers. Pooling timing is instrumented for by the lagged proportion of platformed players from a player's Major League affiliate. Regressions include player, month × year, month × level, Major League affiliation, and player age fixed effects. Standard errors are additively clustered at the player and year × month levels. Players are included in the regression if their last year as a professional baseball player is after 2016 and they had not made the major leagues by the end of 2016.

	Panel A: IV Hitter Monthly Performance							
	PA	R	SLG	BA	OBP	OPS	Promote?	Injury
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Post × Pool	-0.82	3.81	0.16	0.07	0.09	0.24	0.19	0.28*
	[20.77]	[4.65]	[0.12]	[0.06]	[0.06]	[0.18]	[0.32]	[0.16]
Observations	118066	118066	117889	117889	117957	117889	118066	118066
Player F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Month × Year F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Month × Level F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Affiliation F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cluster S.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Instrument	Aff.	Aff.	Aff.	Aff.	Aff.	Aff.	Aff.	Aff.
F-Statistic	12.50	12.50	12.54	12.54	12.54	12.54	12.50	12.50
Y-Mean	59.35	7.27	0.35	0.24	0.32	0.68	0.07	0.05
Y-SD	33.88	5.22	0.14	0.08	0.08	0.20	0.26	0.23
Pool Mean	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Pool SD	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10

	Panel B: IV Pitcher Monthly Performance							
	IP	K's	FIP	ERA	WHIP	K/BB	Promote?	Injury
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Post × Pool	2.68	-2.23	2.98**	2.73	0.53	-1.38	0.14	0.12
	[3.92]	[3.86]	[1.32]	[1.90]	[0.32]	[1.13]	[0.26]	[0.14]
Observations	126194	126194	126011	126011	126011	116697	126194	126194
Player F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Month × Year F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Month × Level F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Affiliation F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cluster S.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Instrument	Aff.	Aff.	Aff.	Aff.	Aff.	Aff.	Aff.	Aff.
F-Statistic	20.12	20.12	20.17	20.17	20.17	18.89	20.12	20.12
Y-Mean	12.05	11.64	0.70	4.28	1.43	2.84	0.08	0.05
Y-SD	7.55	7.31	1.87	3.26	0.54	1.98	0.28	0.22
Pool Mean	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Pool SD	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10

Table 10: Instrument Soliciting Sign-Up Quality

This table reports the OLS regression coefficients for regressing the excess affiliation percentage of players within a pool on the lagged proportion of platformed players from a focal player's home location or lagged proportion of platformed players from a focal player's Major League affiliate. The excess affiliation is computed as the proportion of players from the most common affiliation within the pool minus the naive proportion if players randomly pooled. Regressions include year × month and location fixed effects. Control variables include the size of the pool while regressions are inversely weighted by pool size. Standard errors are additively clustered at the player and year × month levels. Players are included in the regression if their last year as a professional baseball player is after 2016 and they had not made the major leagues by the end of 2016.

	Excess Affiliation Percent (Max Aff. % - Naive Aff. %)					
	Placebo			Real		
	(1)	(2)	(3)	(4)	(5)	(6)
Platform Location Instrument	0.25	-0.29	0.12			
	[0.54]	[0.99]	[0.41]			
Platform Affiliation Instrument				1.33	1.80	1.54**
				[1.10]	[1.07]	[0.73]
Observations	423	421	406	423	421	406
R^2	0.03	0.15	0.35	0.04	0.16	0.36
Month × Year F.E.	No	Yes	Yes	No	Yes	Yes
Location F.E.	No	No	Yes	No	No	Yes
Cluster S.E.	Yes	Yes	Yes	Yes	Yes	Yes
Y-Mean	0.26	0.26	0.27	0.26	0.26	0.27
Y-SD	0.29	0.29	0.30	0.29	0.29	0.30
X1-Mean	0.02	0.02	0.02	0.01	0.01	0.01
X1-SD	0.04	0.04	0.04	0.02	0.02	0.02

Table 11: Player Longevity Surrounding Pooling

This table reports the OLS regression coefficients for regressing a player's longevity on his platforming and pooling choice and timing. *Final month* indicates a player's final month within minor league baseball. Regressions include player, month × year, level, and age fixed effects. Standard errors are additively clustered at the player and month × year levels. The sample includes player × month observations through the end of 2022. Players are included in the regression if their last year as a professional baseball player is after 2016 and they had not made the major leagues by the end of 2016.

	Final Month?							
	Platform				Pooling			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Join Platform	-0.02***							
	[0.00]							
Post Platform		-0.00	0.03	-0.04				
		[0.01]	[0.04]	[0.08]				
Join Pool					-0.02***			
					[0.00]			
Post Pool						-0.01	0.05	-0.05
						[0.01]	[0.07]	[0.10]
Observations	240497	239850	239850	239850	240374	239850	239850	239850
R^2	0.03	0.07	-0.00	-0.00	0.03	0.07	-0.00	-0.00
Player F.E.	No	Yes	Yes	Yes	No	Yes	Yes	Yes
Month × Year F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Location F.E.	No	No	No	No	No	No	No	No
Level F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Affiliation F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Sample	<= 2022	<= 2022	<= 2022	<= 2022	<= 2022	<= 2022	<= 2022	<= 2022
Cluster S.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Instrument	-	-	Loc.	Aff.	-	-	Loc.	Aff.
1st Stage F-Statistic	-	-	55.10	12.83	-	-	37.08	21.23
Y-Mean	0.08	0.07	0.07	0.07	0.08	0.07	0.07	0.07
Y-SD	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26
X1-Mean	0.05	0.00	0.00	0.00	0.02	0.00	0.00	0.00
X1-SD	0.22	0.00	0.00	0.00	0.15	0.00	0.00	0.00

Appendix

Variable Definition

Hitter Playing Statistics

Plate Appearances (PA): The number of times a player completes a turn batting regardless of the result.

Runs (R): The number of times a player scores a run for his team.

Slugging (SLG): The average number of bases recorded per at-bat.

- $\text{SLG} = \frac{(\#\text{Singles}\times 1+\#\text{Doubles}\times 2+\#\text{Triples}\times 3+\#\text{Home Runs}\times 4)}{\#\text{At-Bats}}$

Batting Average (BA): The average number of hits per at-bat.

- $\text{BA} = \frac{\text{Total Hits}}{\text{Total At Bats}}$

On-Base Percentage (OBP): The measure of how frequently a player gets on base per plate appearance.

- $\text{OBP} = \frac{\text{Hits+Walks+Hit by Pitch}}{\text{At Bats+Walks+Hit by Pitch+Sacrifice Flies}}$

On-Base Percentage Plus Slugging (OPS): A combined measure of a hitter's on-base percentage and slugging which proxies for his ability to get on base and hit for power.

- OPS = Slugging + On-Base Percentage

Promote?: An indicator function taking the value 1 if a hitter is promoted to a higher level in a given month and zero otherwise.

- I create a level factor variable with the following categories for a player's level:

    1. International Rookie and Domestic Rookie Ball
    2. Low-A
    3. Single-A
    4. High-A
    5. Double-AA
    6. Triple-AAA
    7. MLB

Injury: An indicator function taking the value 1 if a hitter is injured in a given month and zero otherwise.

Pitcher Playing Statistics

Innings Pitched (IP): The number of outs a pitcher records divided by 3.

- $\text{IP} = \frac{\text{Outs}}{3}$

Strikeouts (K's): The number of outs a pitcher records by striking out a player (e.g. recording three strikes)

Fielding Independent Pitching (FIP): A pitching measure which attempts to net out the impact of defense (lower is better).

- $\text{FIP} = \frac{13\times\text{Home Runs}+3\times(\text{Walks}+\text{Hit by Pitch})-2\times\text{Strikeouts}}{\text{Innings Pitched}}$

Earned Run Average (ERA): The number of earned runs a pitcher allows per 9 innings.

- $\text{ERA} = \frac{\text{Earned Runs Allowed}}{\text{Innings Pitched}\times\frac{1}{9}}$

Walks and Hits Per Innings Pitched (WHIP): The number of walks and hits a pitcher allows per inning he pitches.

- $\text{WHIP} = \frac{\text{Walks}+\text{Hits}}{\text{Innings Pitched}}$

Strikeouts to Walk Ratio (K/BB): The number of strikeouts per walk a pitcher records.

- $\text{K/BB} = \frac{\text{Strikeouts}}{\text{Walks}}$

Promote?: An indicator function taking the value 1 if a hitter is promoted to a higher level in a given month and zero otherwise.

- I create a level factor variable with the following categories for a player's level:

    1. International Rookie and Domestic Rookie Ball
    2. Low-A
    3. Single-A
    4. High-A
    5. Double-AA
    6. Triple-AAA
    7. MLB

Injury: An indicator function taking the value 1 if a hitter is injured in a given month and zero otherwise.

History of Minor League Baseball

Major League Baseball began in 1869 aided by the Civil War which led to the spread of baseball from a regional game played largely within New York to a national game. Early leagues featured hundreds of clubs nationally which slowly sorted themselves into two premier leagues called the National League (founded in 1876) and the American League (founded in 1901). Many independent clubs existed outside of these two leagues who faced the constant threat of losing players to the top league while the top leagues desired a place for their contracted players to gain experience and develop. Minor league baseball traces its origins back to the Northwestern League founded in 1883 which respected the contracted rights of National League clubs and sorted players into the major league (those paid above $1,000) and minor leagues (those earning under $1,000). Through the early 20th century, minor league baseball remained largely independent of Major League Baseball teams outside of the ability of Major League Teams to sign players from minor league teams.

In the early 1920's, Branch Rickey, the general manager of the St. Louis Cardinals, began acquiring minor league baseball teams linked to the Major League Team to develop talent internally which shifted the ownership and development path of many minor league baseball teams to a Major League affiliate organization. While the majority of minor league baseball teams are independently owned, all minor league teams today share an affiliation with a Major League Team.

No Pooling–Solve for Optimal Choice of Effort

- Consider an individual with the following payout function and cost of effort:

$$\max_{e_i} a \times \sqrt{e_i} - e_i \tag{5}$$

- Where e_i *denotes effort for individual i and a is a constant > 1*
- Taking the derivative with respect to an individual i's effort level, we can show that:

$$\frac{a}{2\sqrt{e_i}} - 1 = 0 \tag{6}$$

- It follows through simplification that an individual i's optimal effort level is $e_i = \frac{a^2}{4}$

Pooling–Solve for Optimal Choice of Effort

- Consider an individual with the following payout function and cost of effort from pooling with another person:

$$\max_{e_i} a \times \sqrt{\frac{e_i + e_j}{2}} - e_i \tag{7}$$

- Where e_i *and* e_j *denotes individual i's and j's effort level respectively*
- Taking the derivative with respect to an individual i's effort level, we can show that:

$$\sqrt{\frac{1}{2}} \times \frac{a}{2\sqrt{\frac{e_i+e_j}{2}}} - 1 = 0 \tag{8}$$

- Assuming homogeneous agents, we can show the following through simplification:

$$\frac{a}{2 \times \sqrt{e} \times \sqrt{2}} - 1 = 0 \tag{9}$$

- It follows through simplification that an individual i's optimal effort level is $e_i = \frac{a^2}{8}$ *and strictly less than the case without pooling*

Figure A.1: Expressing Interest and Joining Income Pools

This figure shows the number of players expressing interest and joining an income pooling agreement interpolated to match the MILB season. The interpolated data runs from April 2018 to April 2023.

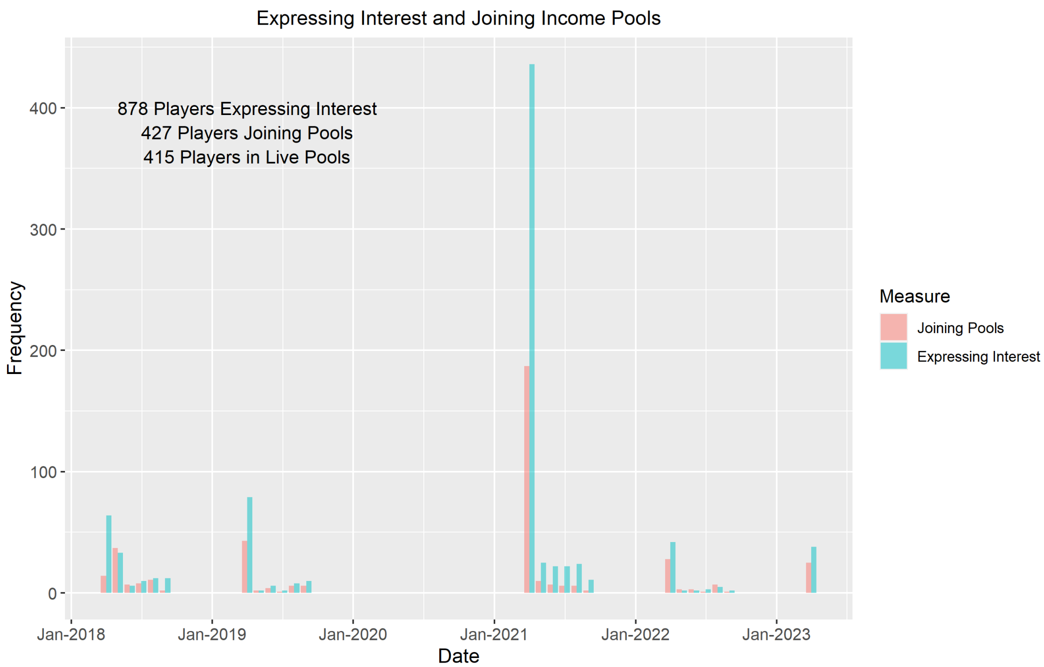

Figure A.2: Expressing Interest and Joining Income Pools

This figure shows the number of players expressing interest and the average and median number of times to join a pool. The data runs from October 2017 to April 2023.

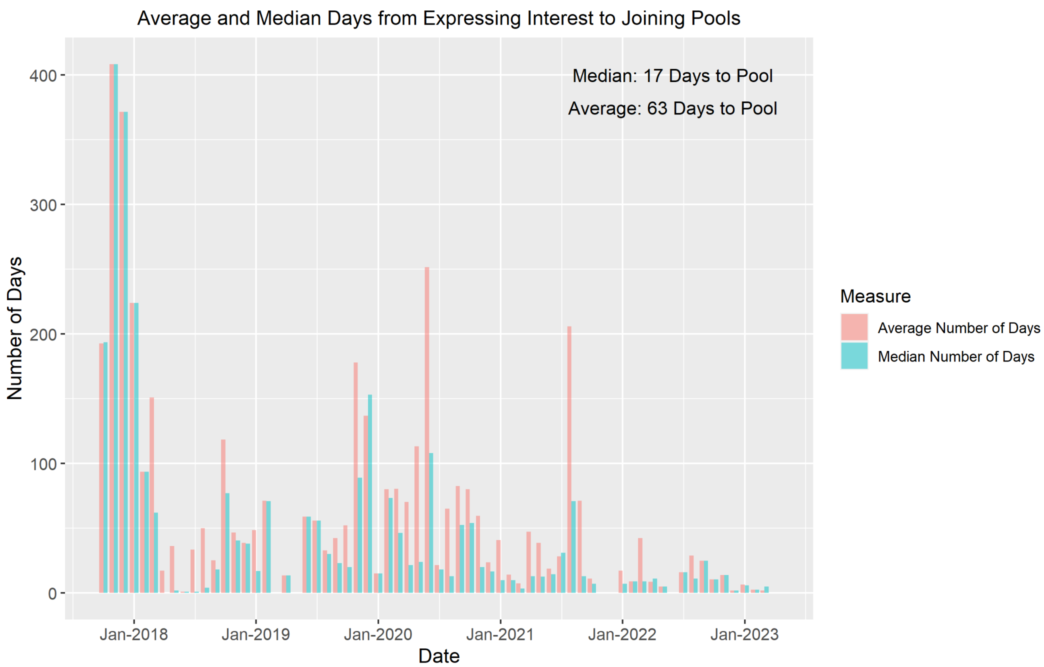

Figure A.3: Average Pool Size Over Time

This figure shows the average pool size over time for the 88 income pools based on the date the pool goes live. The data runs from October 2017 to April 2023.

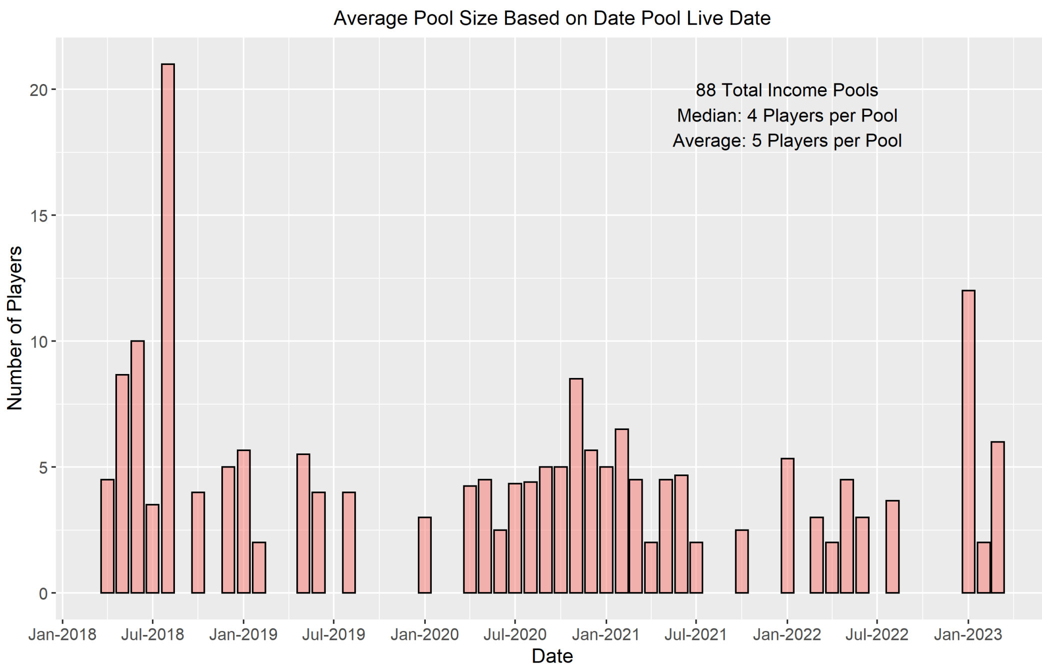

Figure A.4: Expressing Interest and Joining Income Pools

This figure shows the number of players expressing interest and joining an income pooling agreement by domestic versus international players. The data runs from October 2017 to April 2023.

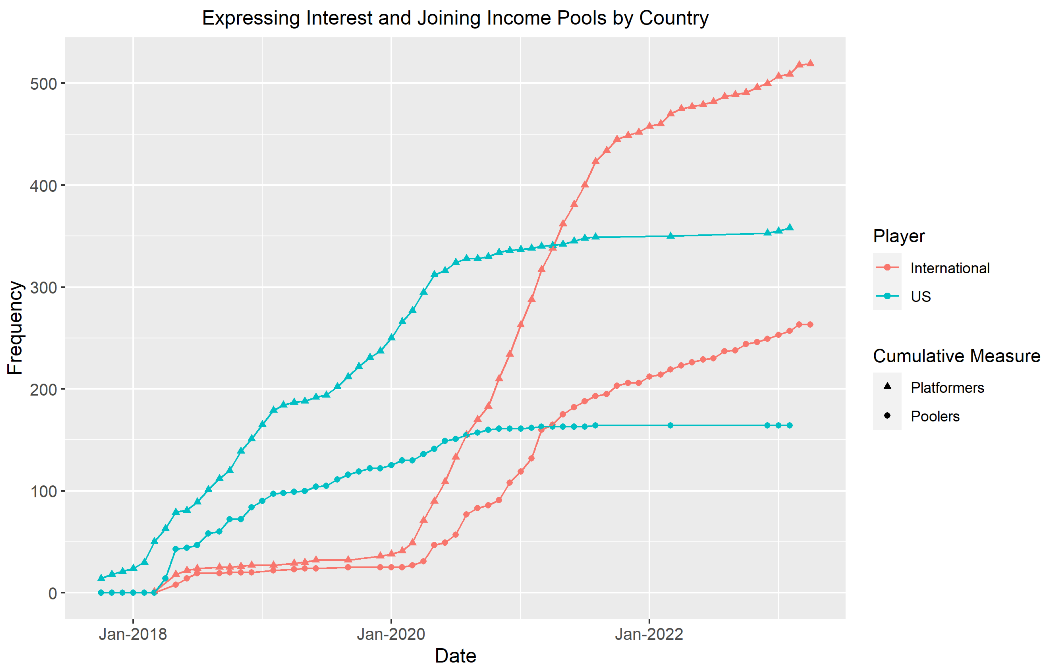

Figure A.5: Coefficient/Mean from Monthly OLS Regression on Hitter Statistics
This figure shows the coefficient scaled by the average hitting statistic from a monthly OLS regression surrounding a hitter's platform and pooling dates.

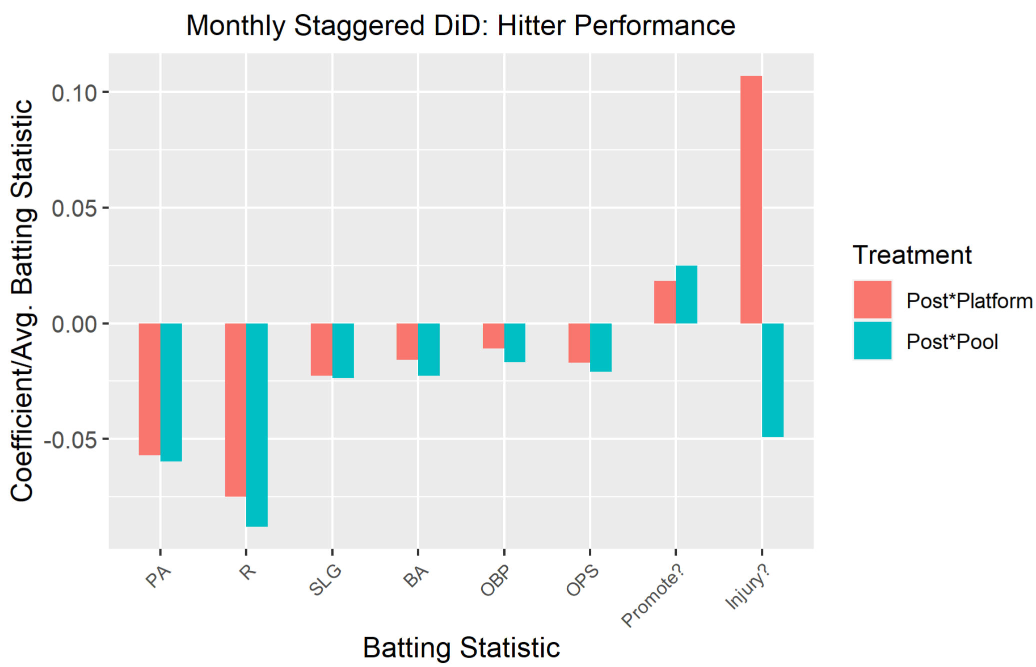

Figure A.6: Coefficient/Mean from Monthly OLS Regression on Pitcher Statistics
This figure shows the coefficient scaled by the average pitching statistic from a monthly OLS regression surrounding a pitcher's platform and pooling dates.

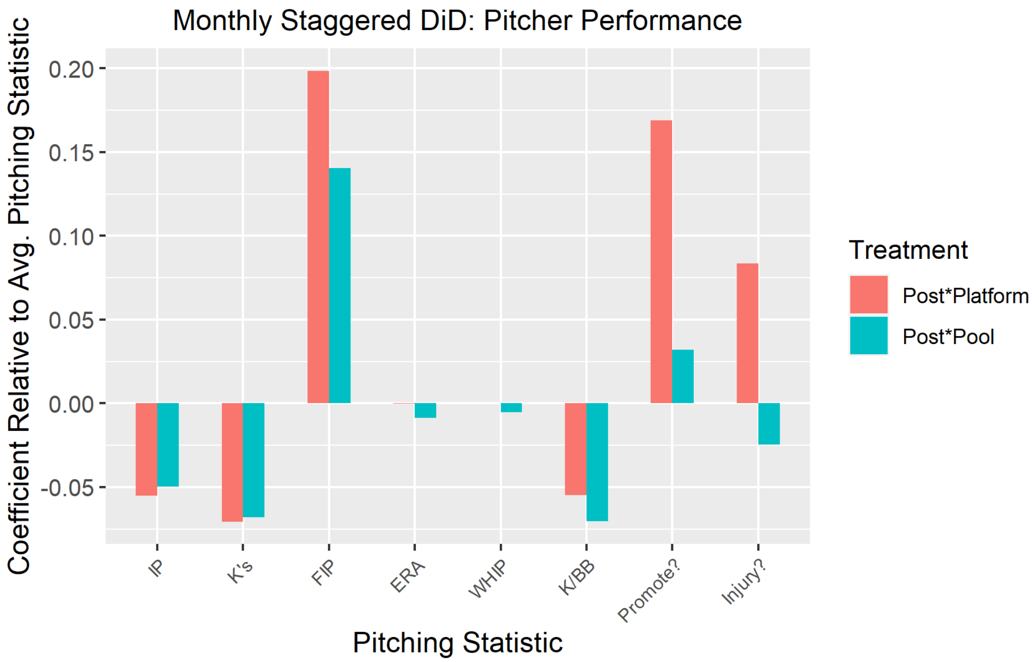

Figure A.7: Dynamic OPS Surrounding Platforming and Pooling

This figure shows the coefficient from a dynamic, monthly OLS regression on a hitter's monthly OPS surrounding his platforming and pooling dates.

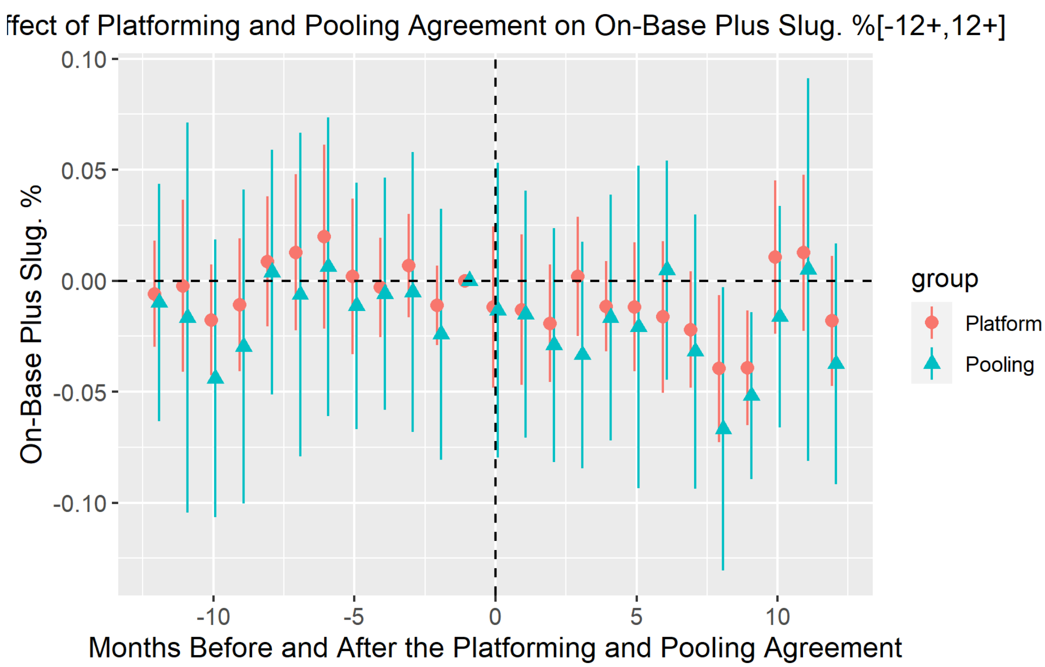

Figure A.8: Dynamic ERA Surrounding Platforming and Pooling
This figure shows the coefficient from a dynamic, monthly OLS regression on a pitcher's monthly ERA surrounding his platforming and pooling dates.

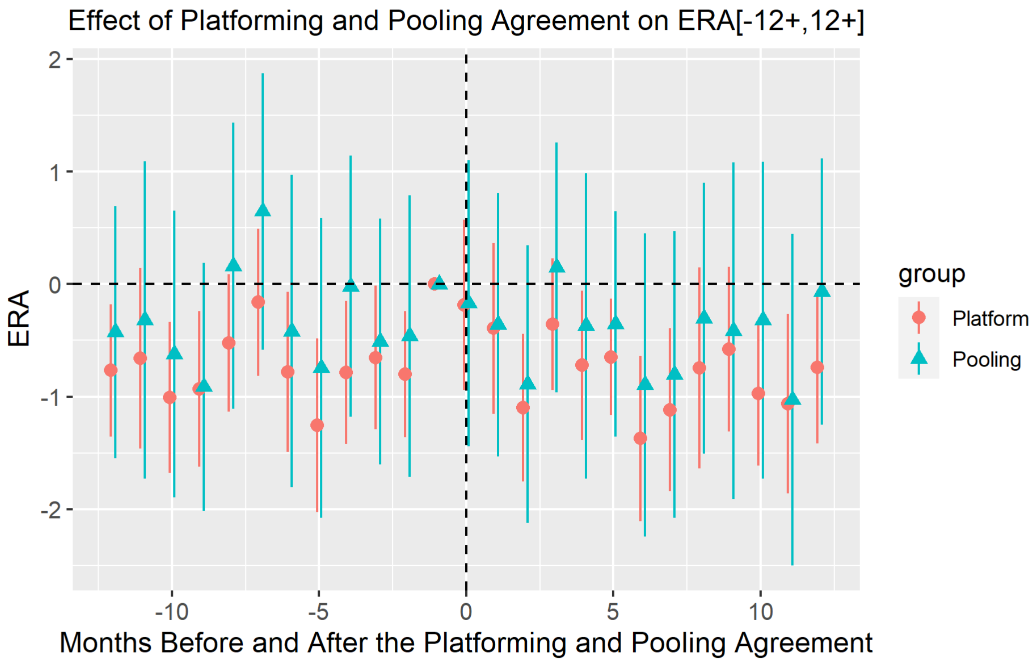

Table A.1: Sample and Likelihood of Success

This table reports the total number of players drafted (Count), the probability a player makes it to major league baseball in his career (Make MLB), the average signing bonus (Bonus), the average CPI-adjusted career earnings (Salary), the average experience or years played in the MLB (Experience), and the average wins above replacement (WAR) based on a player's draft round status or grouping. The data contains all major league players drafted from 1985 to 2022. *Undrafted* represents players eligible for the draft that were not selected while *International* represents international players that were exempt from Major League Baseball's annual draft.

Round #	Count	Make MLB	Bonus	Salary	Experience	WAR
1	1533	0.65	2.54	20.28	4.65	5.56
2	1139	0.46	1.26	7.54	2.56	1.92
3	1051	0.37	0.78	4.41	1.99	1.23
4	1036	0.33	0.53	3.30	1.63	0.94
5	1032	0.31	0.37	3.46	1.59	0.78
6	1003	0.26	0.30	3.00	1.36	0.84
7	989	0.23	0.22	2.43	1.15	0.64
8	997	0.19	0.17	2.26	0.99	0.71
9	969	0.18	0.13	1.45	0.84	0.44
10	940	0.18	0.10	1.36	0.90	0.49
11	907	0.17	0.29	1.60	0.85	0.48
12	955	0.14	0.22	0.80	0.64	0.23
13	920	0.15	0.17	1.98	0.70	0.52
14	897	0.12	0.22	0.63	0.47	0.15
15	864	0.11	0.17	0.64	0.44	0.23
16	881	0.11	0.20	0.61	0.47	0.18
17	834	0.10	0.15	1.96	0.60	0.58
18	854	0.11	0.17	0.86	0.54	0.26
19	827	0.11	0.13	0.60	0.45	0.25
20	811	0.10	0.16	1.20	0.51	0.32
21-25	3757	0.08	0.13	0.67	0.34	0.17
26-30	3341	0.07	0.14	0.42	0.28	0.11
31-35	2727	0.05	0.09	0.27	0.22	0.08
36-40	2038	0.04	0.10	0.29	0.19	0.08
Undrafted	9135	0.04	-	0.29	0.18	0.09
International	22522	0.07	-	1.06	0.36	0.27

Table A.2: Characteristic Comparison Across Poolers and Non-Poolers

This table reports the mean, median, and standard deviation across player characteristics for players that sign a pooling agreement and those that do not. Playing statistics are based upon a player's statistics before platforming. Players are included in the sample if their last year as a professional baseball player is after 2016 and they had not made the major leagues by the end of 2016. ***, **, * correspond to statistical significance at the 1%, 5%, and 10% level, respectively. The Appendix provides detailed variable descriptions.

	Poolers (N = 425)			Non-Poolers (N = 18,613)			Difference
	Mean	Median	SD	Mean	Median	SD	Mean
Timing Characteristics							
First Year Pro	2017.56	2017.00	2.04	2016.79	2017.00	3.68	0.77***
Last Year Pro	2021.26	2022.00	1.69	2020.45	2022.00	2.36	0.81***
Make MLB?	0.06	0.00	0.24	0.08	0.00	0.28	-0.02
First Year MLB	2020.69	2021.00	1.05	2019.63	2020.00	1.82	1.06***
Age First Year Pro	19.69	19.00	2.22	19.97	20.00	2.13	-0.28*
Age First Year MLB	25.23	25.00	1.99	25.21	25.00	2.21	0.02
Years Pro to MLB	4.77	4.50	1.56	4.99	5.00	2.00	-0.22
Age	19.19	18.00	2.16	19.74	20.00	2.35	-0.56***
Player Characteristics							
US Origin?	0.38	0.00	0.49	0.48	0.00	0.50	-0.10***
Pitcher?	0.52	1.00	0.50	0.55	1.00	0.50	-0.02
Drafted?	0.35	0.00	0.48	0.44	0.00	0.50	-0.09***
Undrafted?	0.12	0.00	0.32	0.15	0.00	0.36	-0.04
Draft Characteristics							
Round Number	21.23	21.00	10.29	15.45	14.00	10.61	5.78***
Overall Pick	638.58	634.00	309.22	465.52	416.00	319.47	173.06***
Bonus($100,000's)	1.36	0.89	2.14	5.49	1.72	9.44	-4.13***
Attend College?	0.36	0.00	0.48	0.37	0.00	0.48	-0.00
Drafted High School	0.04	0.00	0.20	0.20	0.00	0.40	-0.16***
Drafted Junior College	0.04	0.00	0.20	0.09	0.00	0.28	-0.05**
Drafted College	0.92	1.00	0.27	0.71	1.00	0.45	0.21***
Minor League Characteristics							
1st Season Begin Level	1.11	1.00	0.32	1.25	1.00	0.66	-0.15***
1st Season End Level	1.28	1.00	0.61	1.47	1.00	0.93	-0.19***
2nd Season Begin Level	1.84	1.00	1.12	2.10	1.00	1.25	-0.27***
2nd Season End Level	2.04	1.00	1.25	2.24	2.00	1.43	-0.19**
3rd Season Begin Level	2.69	3.00	1.41	2.86	3.00	1.52	-0.17*
3rd Season End Level	2.84	3.00	1.59	3.01	3.00	1.72	-0.17
Average OPS	0.70	0.70	0.12	0.66	0.67	0.12	0.04***
Average PA	190.00	180.00	86.26	187.62	168.00	105.09	2.38
Average ERA	3.90	3.58	2.16	5.02	4.28	3.31	-1.12***
Average Innings Pitched	40.11	37.30	18.96	37.28	32.92	22.97	2.82*
Platform Characteristics							
Time to Platform	2.42	2.00	1.66	3.06	3.00	2.00	-0.64***
Platform Age	21.90	22.00	2.20	22.50	23.00	2.44	-0.59***
Pooling Characteristics							
Days to Pool	63.56	17.00	116.31	-	-	-	-
Time to Pool	2.57	2.00	1.67	-	-	-	-
Pooling Age	22.08	22.00	2.28	-	-	-	-

Table A.3: Effect of Platforming on Performance

This table reports the OLS regression coefficients for regressing a minor league baseball player's decision to platform on his performance statistics. Panel A displays results for hitters and Panel B displays results for pitchers. Regressions include player, month × year, month × level, Major League affiliation, and player age fixed effects. Standard errors are additively clustered at the player and year × month levels. Players are included in the regression if their last year as a professional baseball player is after 2016 and they had not made the major leagues by the end of 2016.

	Panel A: Hitter Monthly Performance							
	PA	R	SLG	BA	OBP	OPS	Promote?	Injury
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Post × Platform	-3.39**	-0.54**	-0.01*	-0.00	-0.00	-0.01*	0.00	0.01
	[1.28]	[0.21]	[0.00]	[0.00]	[0.00]	[0.01]	[0.01]	[0.01]
Observations	118066	118066	117889	117889	117957	117889	118066	118066
R^2	0.58	0.45	0.22	0.18	0.19	0.19	0.17	0.11
Player F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Month × Year F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Month × Level F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Location F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Affiliation F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cluster S.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Y-Mean	59.35	7.27	0.35	0.24	0.32	0.68	0.07	0.05
Y-SD	33.88	5.22	0.14	0.08	0.08	0.20	0.26	0.23
Platform Mean	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Platform SD	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15
	Panel B: Pitcher Monthly Performance							
	IP	K's	FIP	ERA	WHIP	K/BB	Promote?	Injury
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Post × Platform	-0.64**	-0.81***	0.14**	0.00	0.00	-0.16**	0.02	0.01
	[0.30]	[0.30]	[0.07]	[0.11]	[0.02]	[0.07]	[0.01]	[0.01]
Observations	126194	126194	126011	126011	126011	116697	126194	126194
R^2	0.51	0.44	0.22	0.16	0.19	0.25	0.18	0.11
Player F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Month × Year F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Month × Level F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Location F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Affiliation F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cluster S.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Y-Mean	12.05	11.64	0.70	4.28	1.43	2.84	0.08	0.05
Y-SD	7.55	7.31	1.87	3.26	0.54	1.98	0.28	0.22
Platform Mean	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Platform SD	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14

Table A.4: Determinants of Platforming Decision

This table reports the OLS regression coefficients for regressing a player's decision to platform at time t on his prior month pitching and hitting statistics. Regressions include player, month $\times$ year, month $\times$ level, Major League affiliate, and age fixed effects. Standard errors are additively clustered at the player and month $\times$ year levels. Players are included in the regression if their last year as a professional baseball player is after 2016 and they had not made the major leagues by the end of 2016.

	Platform?							
	Hitters				Pitchers			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
PA_{t-1}	-0.00**							
	[0.00]							
On-Base % Plus Slugging$_{t-1}$		-0.21						
		[0.22]						
Promotion$_{t-1}$			0.03				0.18	
			[0.16]				[0.13]	
Injury$_{t-1}$				0.11				0.36***
				[0.13]				[0.13]
Inning Pitched$_{t-1}$					-0.01			
					[0.01]			
ERA_{t-1}						0.01		
						[0.01]		
Observations	109384	109243	109391	109391	115733	115610	115943	115943
R^2	0.63	0.63	0.63	0.63	0.65	0.65	0.65	0.65
Player F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Month $\times$ Year F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Month $\times$ Level F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Affiliation F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cluster S.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Y-Mean	2.32	2.32	2.32	2.32	2.25	2.25	2.25	2.25
Y-SD	15.05	15.05	15.05	15.05	14.83	14.83	14.84	14.84
X1-Mean	61.17	0.68	0.08	0.05	12.46	4.17	0.09	0.05
X1-SD	33.59	0.19	0.27	0.22	7.52	3.09	0.29	0.21

Table A.5: Determinants of Pooling Decision

This table reports the OLS regression coefficients for regressing a player's decision to pool at time t on his prior month pitching and hitting statistics. Regressions include player, month × year, month × level, Major League affiliate, and age fixed effects. Standard errors are additively clustered at the player and month × year levels. Players are included in the regression if their last year as a professional baseball player is after 2016 and they had not made the major leagues by the end of 2016.

	Pool?							
	Hitters				Pitchers			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
PA_{t-1}	-0.00							
	[0.00]							
On-Base % Plus Slugging$_{t-1}$		-0.12						
		[0.14]						
Promotion$_{t-1}$			-0.03				-0.01	
			[0.11]				[0.09]	
Injury$_{t-1}$				-0.01				0.12
				[0.08]				[0.10]
Inning Pitched$_{t-1}$					0.00			
					[0.01]			
ERA$_{t-1}$						-0.00		
						[0.01]		
Observations	109384	109243	109391	109391	115733	115610	115943	115943
R^2	0.63	0.63	0.63	0.63	0.62	0.62	0.63	0.63
Player F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Month × Year F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Month × Level F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Affiliation F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cluster S.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Y-Mean	1.11	1.11	1.11	1.11	1.14	1.14	1.14	1.14
Y-SD	10.48	10.48	10.48	10.48	10.60	10.60	10.60	10.60
X1-Mean	61.17	0.68	0.08	0.05	12.46	4.17	0.09	0.05
X1-SD	33.59	0.19	0.27	0.22	7.52	3.09	0.29	0.21

Table A.6: IV Effect of Platforming on Performance: Location Instrument

This table reports the IV regression coefficients for regressing a minor league baseball player's pooling timing on his performance. Panel A displays results for hitters and Panel B displays results for pitchers. Pooling timing is instrumented for by the lagged proportion of platformed players from a domestic player's home state or an international player's home country. Regressions include player, month × year, month × level, Major League affiliation, and player age fixed effects. Standard errors are additively clustered at the player and year × month levels. Players are included in the regression if their last year as a professional baseball player is after 2016 and they had not made the major leagues by the end of 2016.

	Panel A: IV Hitter Monthly Performance							
	PA	R	SLG	BA	OBP	OPS	Promote?	Injury
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Post × Platform	-19.25*	-3.37**	-0.06	-0.03*	-0.01	-0.07	0.07	-0.04
	[10.93]	[1.67]	[0.03]	[0.02]	[0.02]	[0.05]	[0.07]	[0.05]
Observations	118066	118066	117889	117889	117957	117889	118066	118066
Player F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Month × Year F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Month × Level F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Affiliation F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cluster S.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Instrument	Loc.	Loc.	Loc.	Loc.	Loc.	Loc.	Loc.	Loc.
F-Statistic	43.06	43.06	42.69	42.69	42.77	42.69	43.06	43.06
Y-Mean	59.35	7.27	0.35	0.24	0.32	0.68	0.07	0.05
Y-SD	33.88	5.22	0.14	0.08	0.08	0.20	0.26	0.23
Platform Mean	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Platform SD	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15
	Panel B: IV Pitcher Monthly Performance							
	IP	K's	FIP	ERA	WHIP	K/BB	Promote?	Injury
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Post × Platform	-7.37***	-6.16**	0.36	1.09*	0.23**	-1.07**	0.01	0.05
	[2.76]	[2.73]	[0.40]	[0.63]	[0.11]	[0.46]	[0.07]	[0.05]
Observations	126194	126194	126011	126011	126011	116697	126194	126194
Player F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Month × Year F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Month × Level F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Affiliation F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cluster S.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Instrument	Loc.	Loc.	Loc.	Loc.	Loc.	Loc.	Loc.	Loc.
F-Statistic	41.00	41.00	40.97	40.97	40.97	38.56	41.00	41.00
Y-Mean	12.05	11.64	0.70	4.28	1.43	2.84	0.08	0.05
Y-SD	7.55	7.31	1.87	3.26	0.54	1.98	0.28	0.22
Platform Mean	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Platform SD	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14

Table A.7: IV Effect of Platforming on Performance: Affiliation Instrument

This table reports the IV regression coefficients for regressing a minor league baseball player's pooling timing on his performance. Panel A displays results for hitters and Panel B displays results for pitchers. Pooling timing is instrumented for by the lagged proportion of platformed players from a player's Major League affiliate. Regressions include player, month × year, month × level, Major League affiliation, and player age fixed effects. Standard errors are additively clustered at the player and year × month levels. Players are included in the regression if their last year as a professional baseball player is after 2016 and they had not made the major leagues by the end of 2016.

Panel A: IV Hitter Monthly Performance								
	PA	R	SLG	BA	OBP	OPS	Promote?	Injury
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Post × Platform	-0.58	2.69	0.12	0.05	0.06	0.17	0.14	0.20*
	[14.64]	[3.34]	[0.09]	[0.04]	[0.05]	[0.13]	[0.23]	[0.11]
Observations	118066	118066	117889	117889	117957	117889	118066	118066
R^2	0.00	-0.01	-0.01	-0.01	-0.01	-0.01	-0.00	-0.01
Player F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Month × Year F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Month × Level F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Affiliation F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Age F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cluster S.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Instrument	Aff.	Aff.	Aff.	Aff.	Aff.	Aff.	Aff.	Aff.
F-Statistic	10.32	10.32	10.13	10.13	10.15	10.13	10.32	10.32
Y-Mean	59.35	7.27	0.35	0.24	0.32	0.68	0.07	0.05
Y-SD	33.88	5.22	0.14	0.08	0.08	0.20	0.26	0.23
Platform Mean	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Platform SD	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15

Panel B: IV Pitcher Monthly Performance								
	IP	K's	FIP	ERA	WHIP	K/BB	Promote?	Injury
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Post × Platform	2.32	-1.93	2.58**	2.37	0.46	-1.20	0.12	0.11
	[3.42]	[3.35]	[1.13]	[1.64]	[0.28]	[0.97]	[0.23]	[0.12]
Observations	126194	126194	126011	126011	126011	116697	126194	126194
Player F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Month × Year F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Month × Level F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Affiliation F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cluster S.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Instrument	Aff.	Aff.	Aff.	Aff.	Aff.	Aff.	Aff.	Aff.
F-Statistic	13.39	13.39	13.41	13.41	13.41	12.35	13.39	13.39
Y-Mean	12.05	11.64	0.70	4.28	1.43	2.84	0.08	0.05
Y-SD	7.55	7.31	1.87	3.26	0.54	1.98	0.28	0.22
Platform Mean	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Platform SD	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14

Table A.8: Covariance of Performance: Aggregate Pool Monthly

This table reports the OLS regression coefficients for regressing a player's individual performance on the pool's aggregate performance excluding the individual player. All players are included in the sample are included in the regression with non-poolers' Pool OPS and pool ERA set to the level of all non-poolers. Regressions include player, month × year, month × level, and Major League affiliate fixed effects. Standard errors are additively clustered at the pool and month × year levels. Players are included in the regression if their last year as a professional baseball player is after 2016 and they had not made the major leagues by the end of 2016.

	Individual OPS		Individual ERA	
	(1)	(2)	(3)	(4)
Pool OPS	-0.28	-0.46		
	[0.54]	[0.68]		
Post Pool	-0.02	-0.67	-0.37	-4.71
	[0.02]	[0.55]	[0.30]	[4.48]
Post Pool × Pool OPS		0.91		
		[0.76]		
Pool ERA			-0.58	-0.91
			[0.64]	[0.95]
Post Pool × Pool ERA				1.01
				[1.00]
Observations	119930	119930	125334	125334
R^2	0.20	0.20	0.16	0.16
Player F.E.	Yes	Yes	Yes	Yes
Month × Year F.E.	Yes	Yes	Yes	Yes
Month × Level F.E.	Yes	Yes	Yes	Yes
Affiliation F.E.	Yes	Yes	Yes	Yes
Cluster S.E.	Yes	Yes	Yes	Yes
Y-Mean	0.68	0.68	4.42	4.42
Y-SD	0.20	0.20	3.44	3.44
X1-Mean	0.71	0.71	4.20	4.20
X1-SD	0.02	0.02	0.34	0.34

Table A.9: Covariance of Performance: Aggregate Pool Monthly

This table reports the OLS regression coefficients for regressing a player's individual performance on another player's performance. Only pooling players are included in the regression with identifying variation stemming from whether players are in the same pool and whether the performance measure is from before or after their pooling. Regressions include player, month × year, month × level, and Major League affiliate fixed effects. Standard errors are additively clustered at the pool and month × year levels. Players are included in the regression if their last year as a professional baseball player is after 2016 and they had not made the major leagues by the end of 2016.

	Scaled OPS			Scaled ERA		
	(1)	(2)	(3)	(4)	(5)	(6)
Scaled OPS	-0.01***	-0.01***	-0.01***			
	[0.00]	[0.00]	[0.00]			
Same Pool	0.03***	0.02**	0.05***	-0.01	-0.00	0.01
	[0.01]	[0.01]	[0.01]	[0.01]	[0.01]	[0.02]
Post Both Pool	-0.05**		-0.05**	0.01		0.01
	[0.02]		[0.02]	[0.02]		[0.02]
Same Pool × Scaled OPS		0.03	0.03			
		[0.02]	[0.02]			
Post Both Pool × Scaled OPS			-0.00			
			[0.00]			
Same Pool × Post Both Pool			-0.05			-0.04
			[0.03]			[0.03]
Same Pool × Post Both Pool × Scaled OPS			0.01			
			[0.04]			
Scaled ERA				-0.01***	0.00	-0.01***
				[0.00]	[0.00]	[0.00]
Same Pool × Scaled ERA					0.02	0.02
					[0.03]	[0.02]
Post Both Pool × Scaled ERA						-0.00
						[0.00]
Same Pool × Post Both Pool × Scaled ERA						-0.02
						[0.04]
Observations	1194469	1194469	1194469	1163227	1163227	1163227
R^2	0.17	0.17	0.17	0.11	0.10	0.11
Player 1 F.E.	Yes	Yes	Yes	Yes	Yes	Yes
Player 2 F.E.	Yes	Yes	Yes	Yes	Yes	Yes
Counter F.E.	Yes	Yes	Yes	Yes	Yes	Yes
Pool F.E.	Yes	Yes	Yes	Yes	Yes	Yes
Cluster S.E.	Yes	Yes	Yes	Yes	Yes	Yes
Y-Mean	0.03	0.03	0.03	-0.06	-0.06	-0.06
Y-SD	0.92	0.92	0.92	0.78	0.78	0.78
X1-Mean	0.04	0.04	0.04	-0.06	-0.06	-0.06
X1-SD	0.92	0.92	0.92	0.78	0.78	0.78

Table A.10: Determinants of Pool Size

This table reports the OLS regression coefficients for regressing the size of a pool a player decides to enter on his characteristics. Standard errors are additively clustered at the pool and pool live year levels. Players are included in the regression if their last year as a professional baseball player is after 2016 and they had not made the major leagues by the end of 2016.

	Pool Size		
Sample	All	Hitters	Pitchers
	(1)	(2)	(3)
Round Number	0.12	0.16	0.09
	[0.11]	[0.10]	[0.13]
Bonus	0.39	0.34	0.36
	[0.32]	[0.21]	[0.41]
Drafted HS	-3.83	-4.23*	-4.13
	[2.45]	[2.07]	[5.20]
Drafted JC	-3.34**	7.12**	-4.55
	[1.03]	[2.74]	[2.96]
Pitcher	0.30		
	[0.55]		
US Origin	6.29	9.78*	5.71
	[4.42]	[4.57]	[4.31]
Pooling Age	-0.32**	-0.62**	-0.13
	[0.12]	[0.23]	[0.08]
Observations	426	202	224
R^2	0.22	0.28	0.20
Cluster S.E.	Yes	Yes	Yes
Y-Mean	7.20	7.14	7.25
Y-SD	4.83	4.73	4.93

Internet Appendix

Figure IA.1: Likelihood of Making MLB by Draft Round Position

This figure shows the likelihood of a player making the major leagues conditional on a player's draft round position. MLB draft data is available from 1985 to 2022 while a player's draft round position is set to the round in which he signed with his future team.

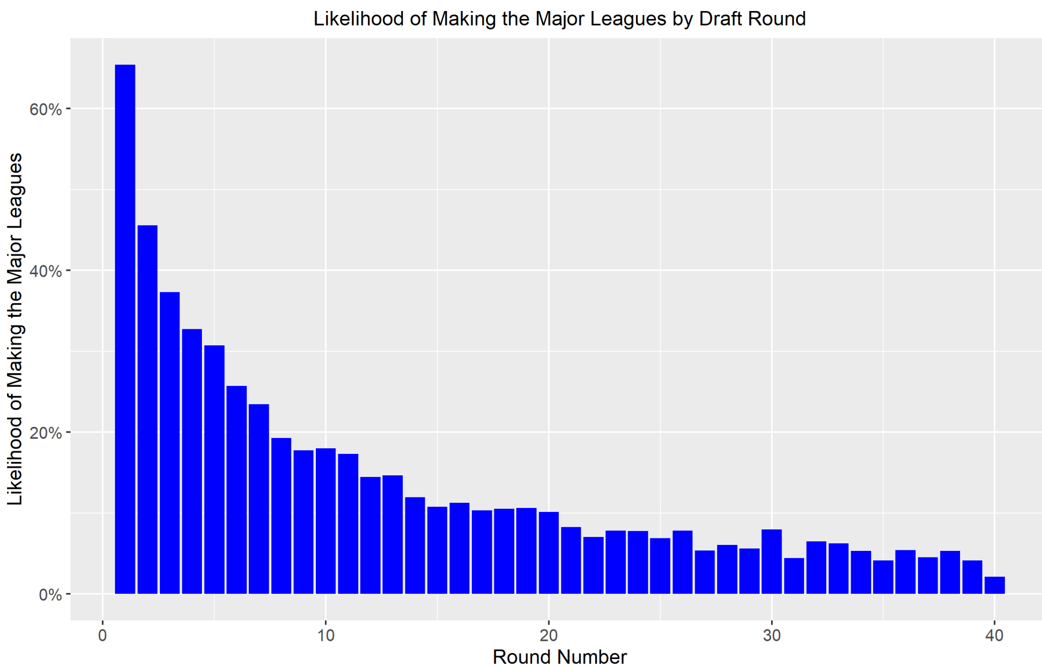

Figure IA.2: Average and Median Career Earnings by Draft Round Position

This figure shows the average and median career earnings (CPI-adjusted) of a player in the major leagues given his draft round position. MLB draft data is available from 1985 to 2022 while a player's draft round position is set to the round in which he signed with his future team.

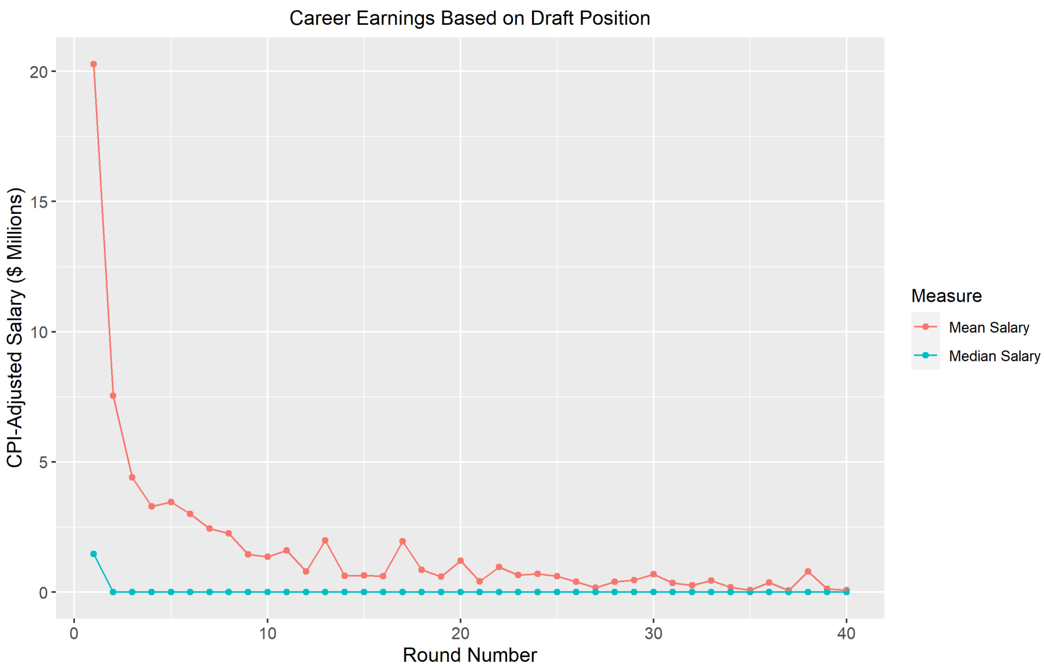

Figure IA.3: Expressing Interest and Joining Income Pools

This figure shows the number of players expressing interest and the average and median number of days to join a pool. The interpolated data runs from April 2018 to April 2023.

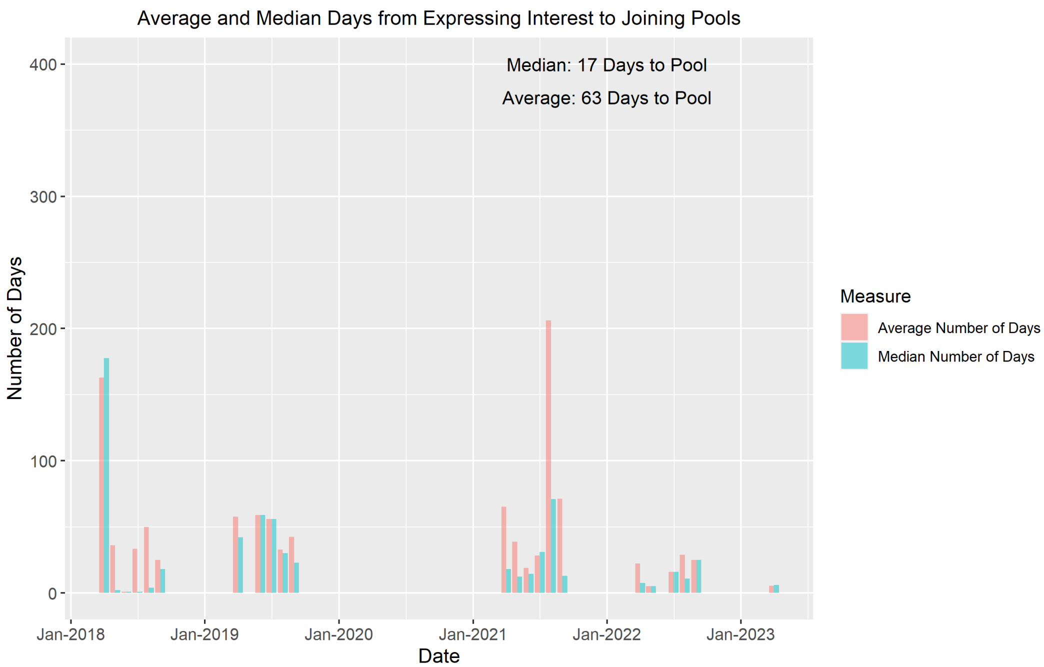

Figure IA.4: Expressing Interest and Joining Income Pools

This figure shows the number of players expressing interest and likelihood of eventually joining an income pooling agreement. The data runs from October 2017 to April 2023.

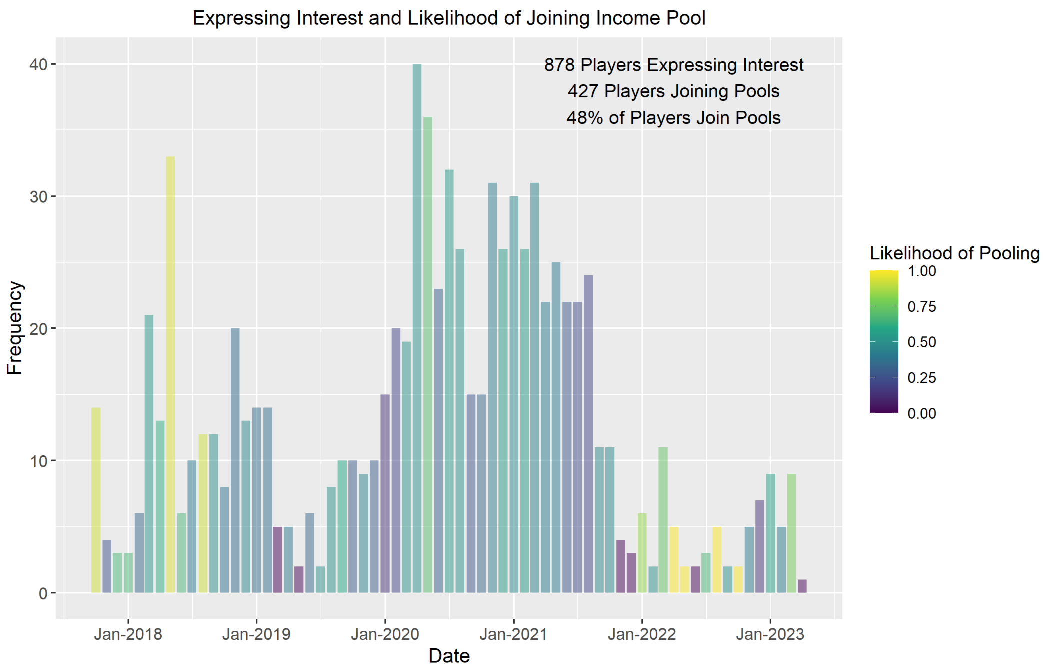

Figure IA.5: Expressing Interest and Joining Income Pools

This figure shows the number of players expressing interest and likelihood of eventually joining an income pooling agreement. The interpolated data runs from April 2018 to April 2023.

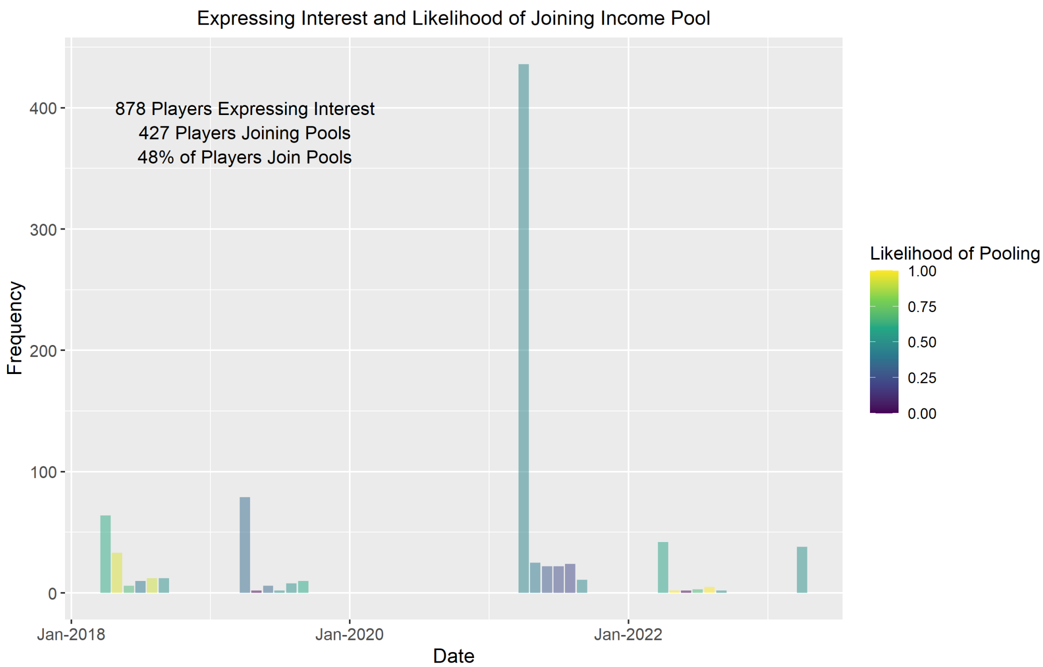

Figure IA.6: Expressing Interest and Joining Income Pools

This figure shows the number of players expressing interest and joining an income pooling agreement for inactive players who have retired from minor league baseball. The data runs from October 2017 to April 2023.

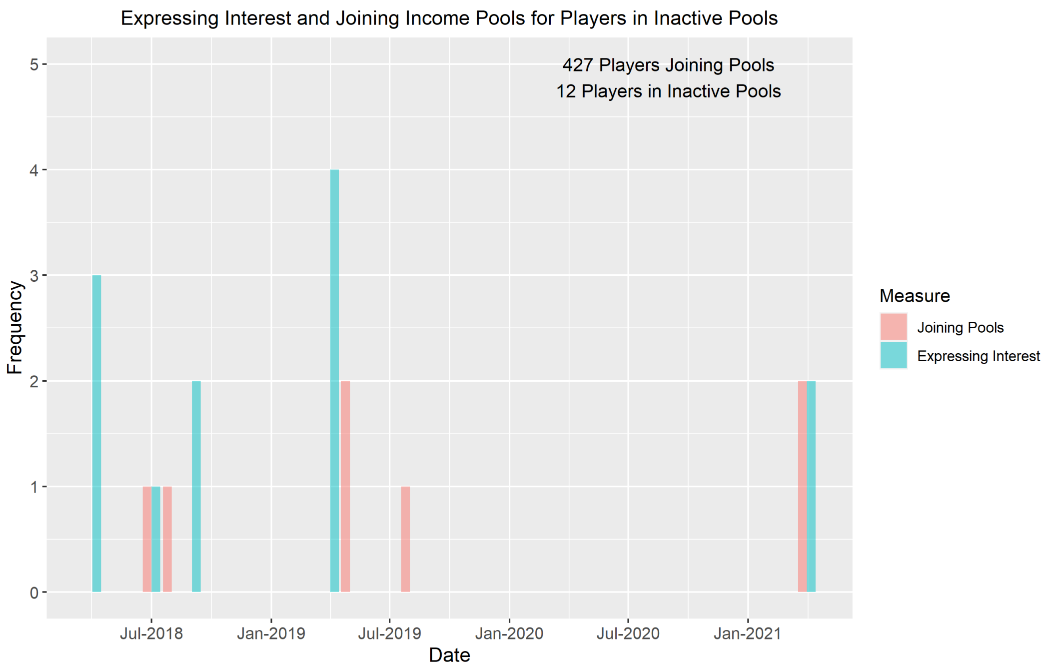

Figure IA.7: Average Hitter OPS Before and After Platforming, by Year of Platforming

This figure shows the OPS for hitters around the adoption of platforming. Treatment timing year is denoted by the dotted, vertical line in each panel. The red line denotes the average OPS for non-platformed players and the blue line denotes the average OPS for platformed players. The error bands denote the 95 percent confidence interval.

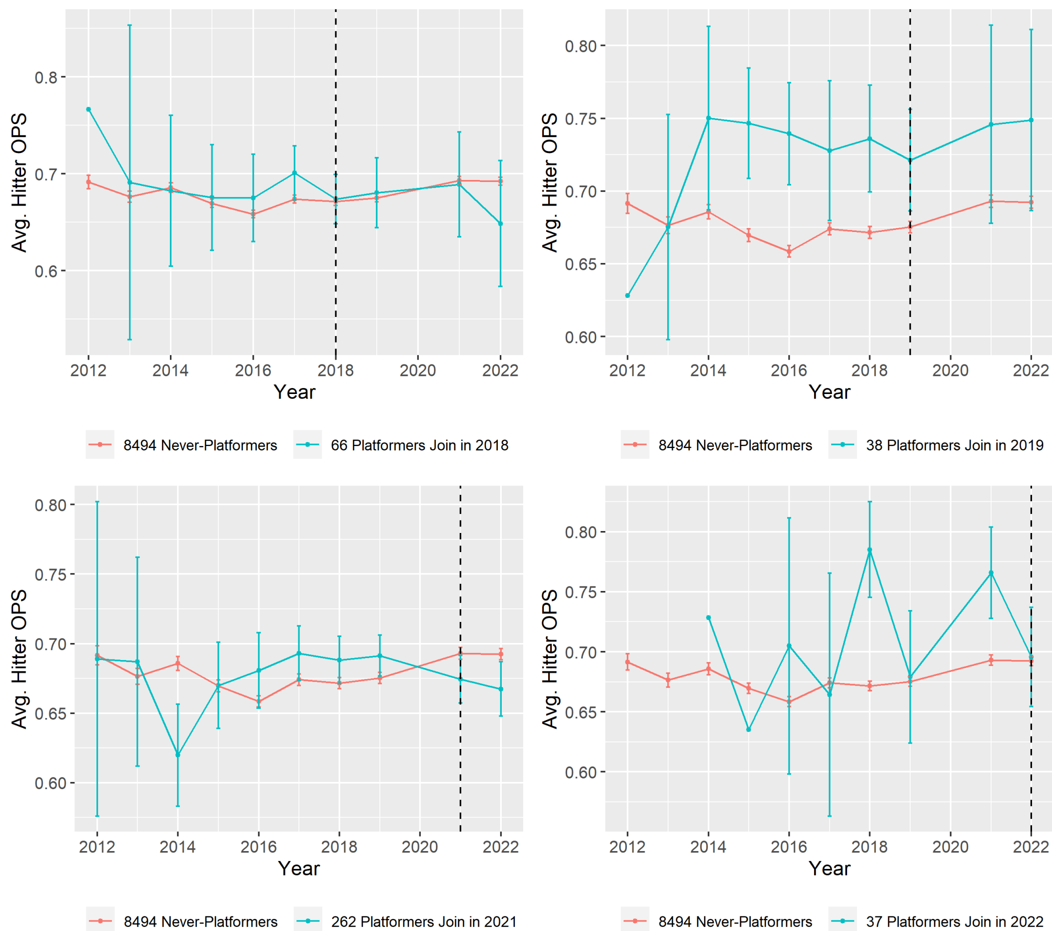

Figure IA.8: Average Pitcher ERA Before and After Platforming, by Year of Platforming

This figure shows the ERA for pitchers around the adoption of platforming. Treatment timing year is denoted by the dotted, vertical line in each panel. The red line denotes the average ERA for non-platformed players and the blue line denotes the average ERA for platformed players. The error bands denote the 95 percent confidence interval.

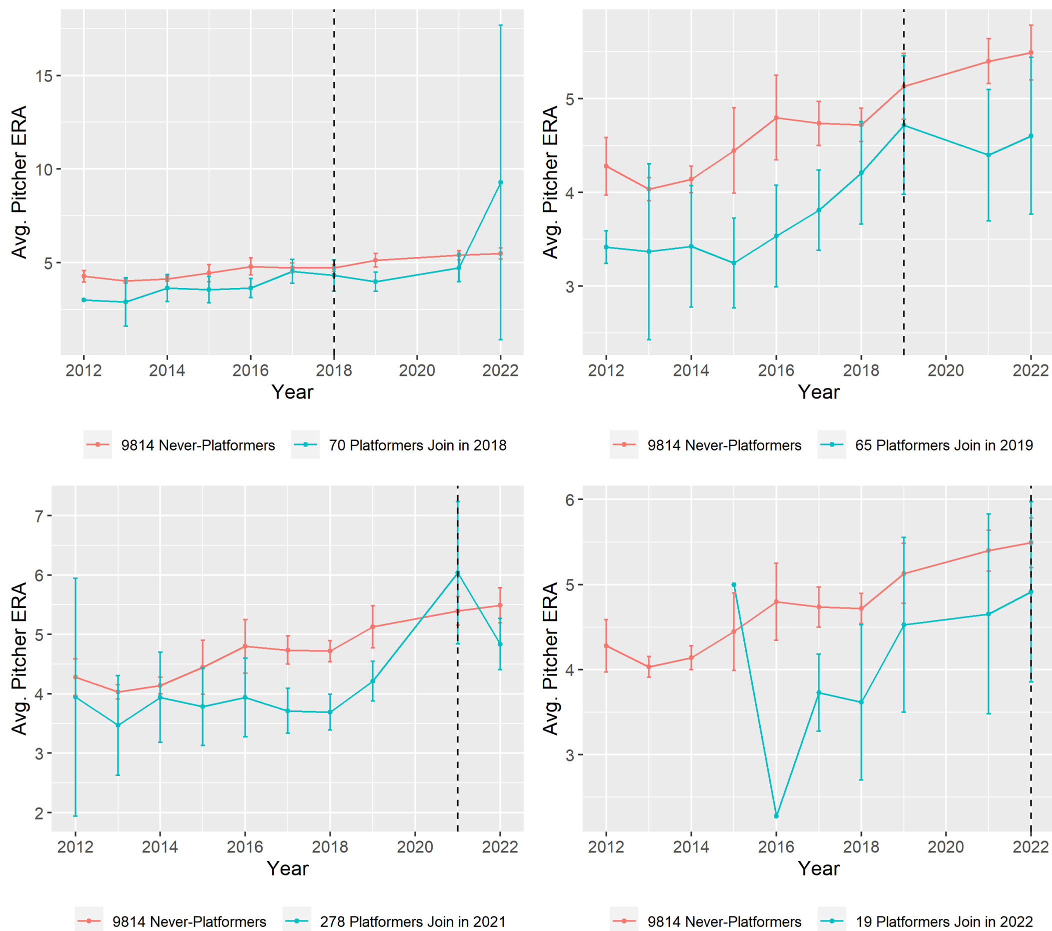

Figure IA.9: Average Hitter OPS Before and After Pooling, by Year of Pooling
This figure shows the OPS for hitters around the adoption of pooling. Treatment timing year is denoted by the dotted, vertical line in each panel. The red line denotes the average OPS for non-pooled players and the blue line denotes the average OPS for pooled players. The error bands denote the 95 percent confidence interval.

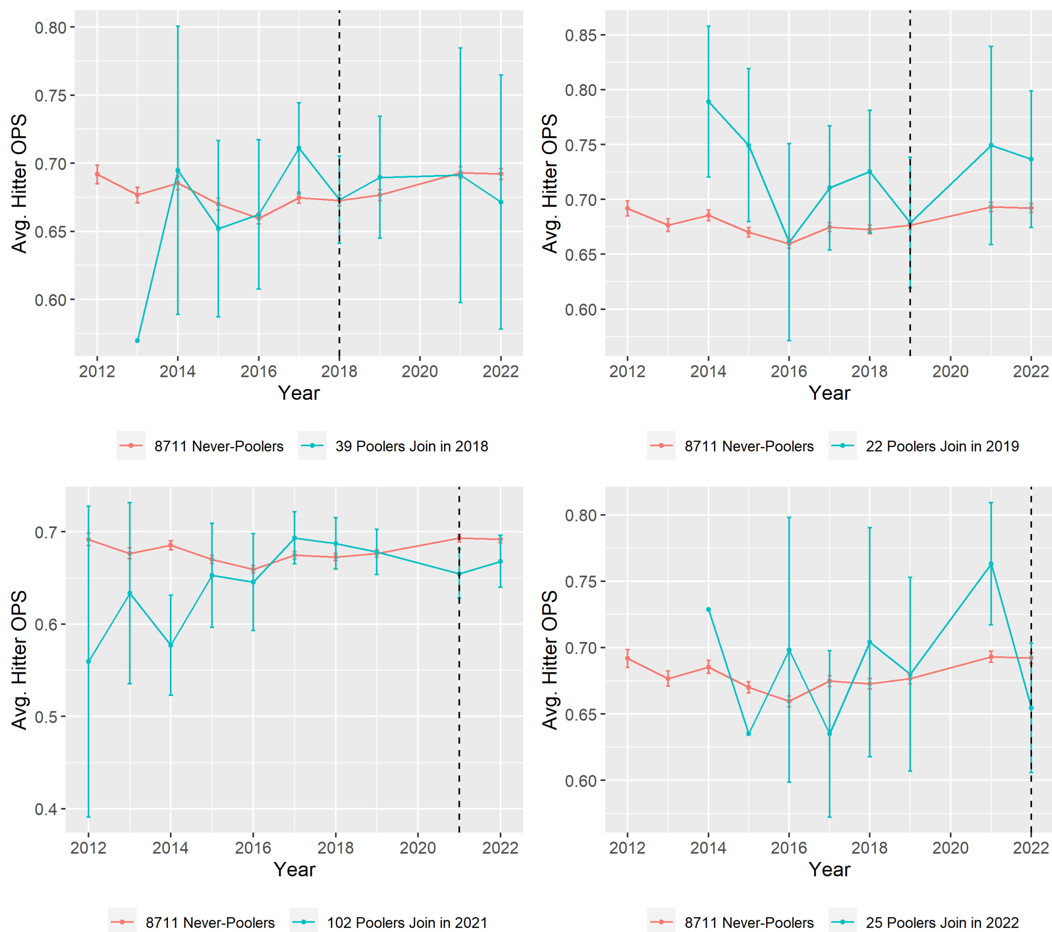

Figure IA.10: Average Pitcher ERA Before and After Pooling, by Year of Pooling
This figure shows the ERA for pitchers around the adoption of pooling. Treatment timing year is denoted by the dotted, vertical line in each panel. The red line denotes the average ERA for non-pooled players and the blue line denotes the average ERA for pooled players. The error bands denote the 95 percent confidence interval.

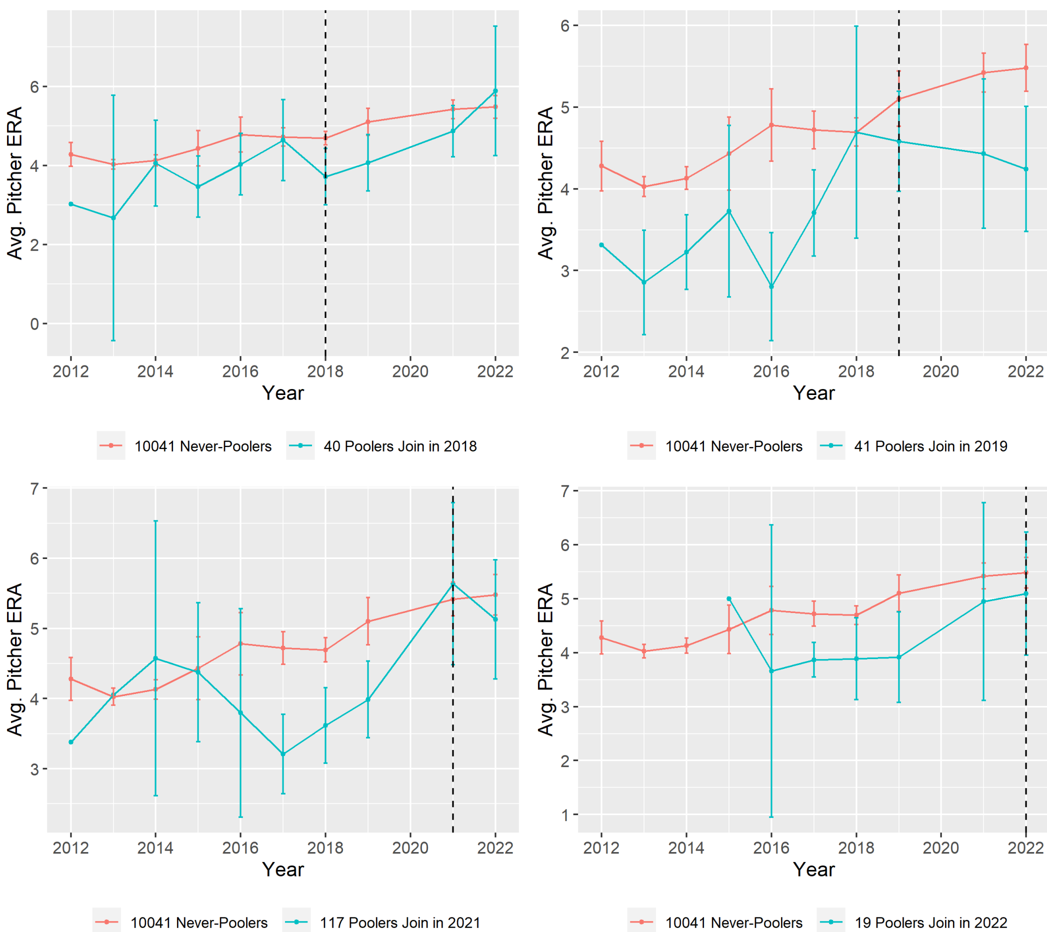

Figure IA.11: *t*-Statistic from Annual OLS Regression on Hitter Statistics
This figure shows the t-statistic from an annual OLS regression surrounding a hitter's platform and pooling dates.

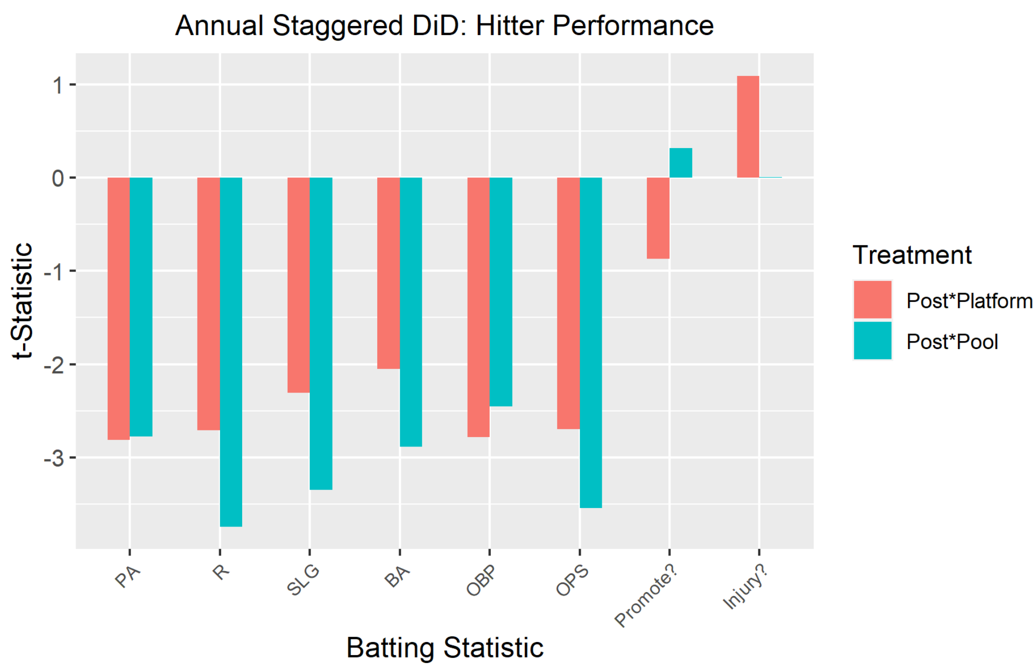

Figure IA.12: Coefficient/Mean from Annual OLS Regression on Hitter Statistics
This figure shows the coefficient scaled by the average hitting statistic from an annual, OLS regression surrounding a hitter's platform and pooling dates.

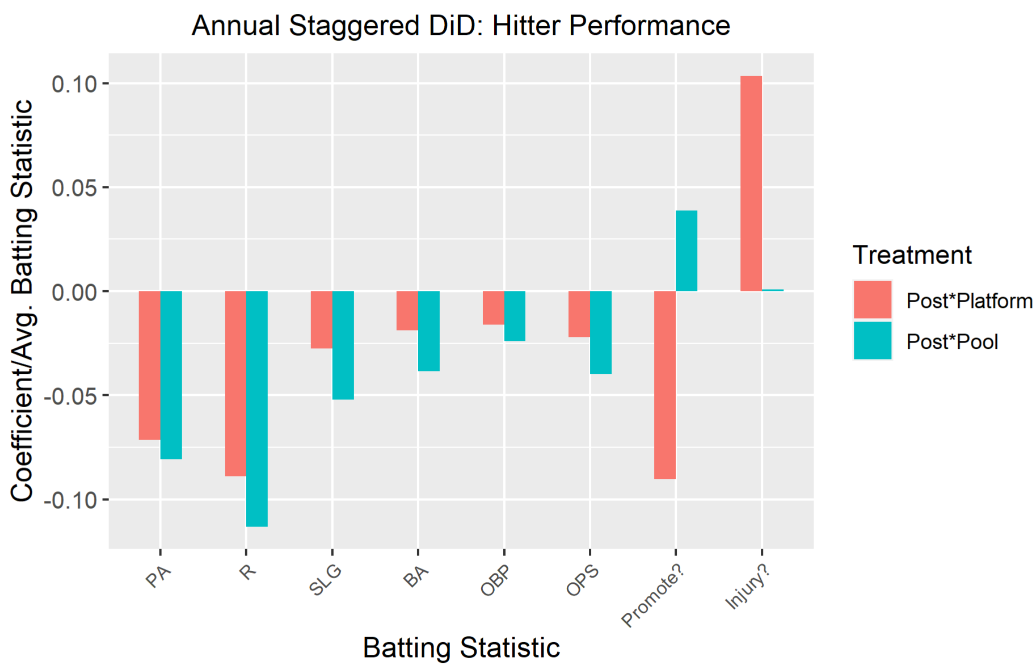

Figure IA.13: *t*-Statistic from Annual OLS Regression on Pitcher Statistics
This figure shows the t-statistic from an annual OLS regression surrounding a pitcher's platform and pooling dates.

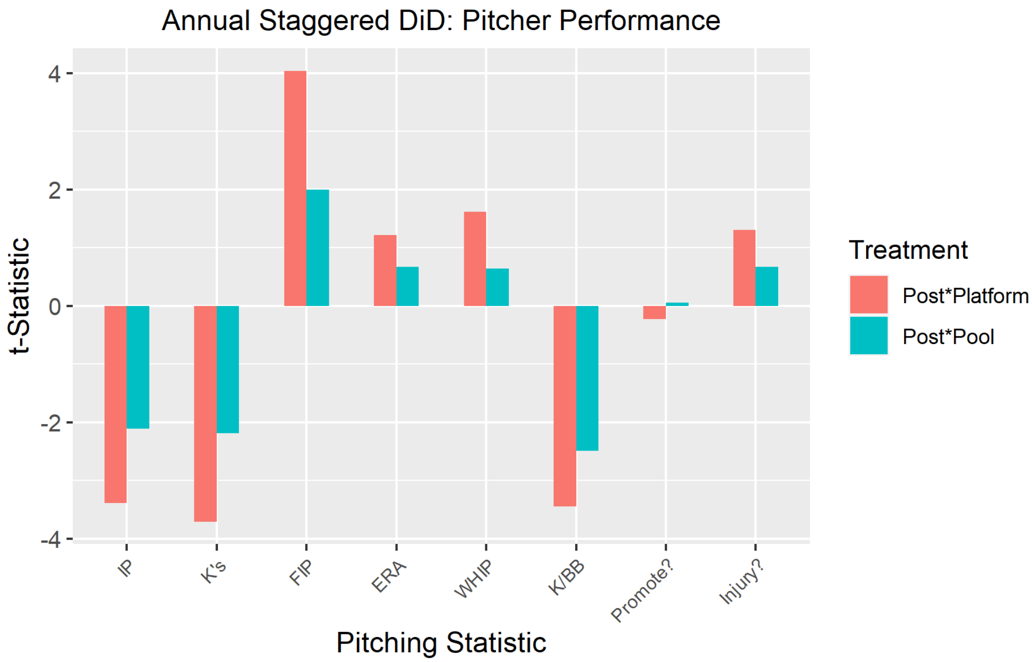

Figure IA.14: Coefficient/Mean from Annual OLS Regression on Pitcher Statistics
This figure shows the coefficient scaled by the average pitching statistic from an annual, OLS regression surrounding a pitcher's platform and pooling dates.

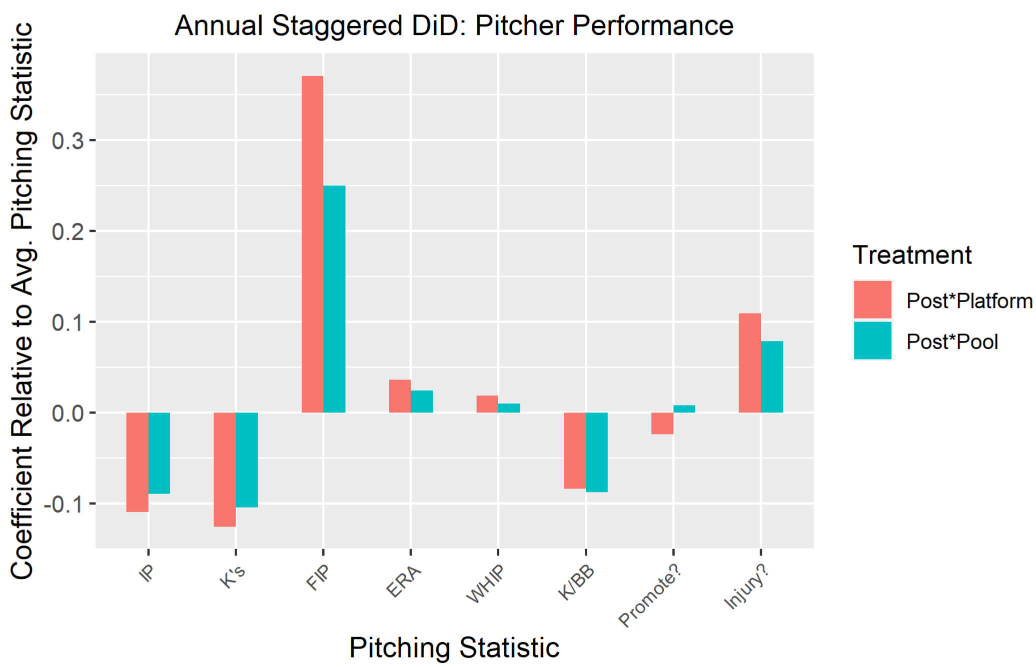

Figure IA.15: Dynamic OPS Surrounding Platforming and Pooling
This figure shows the coefficient from a dynamic, annual OLS regression on a hitter's annual OPS surrounding his platforming and pooling dates.

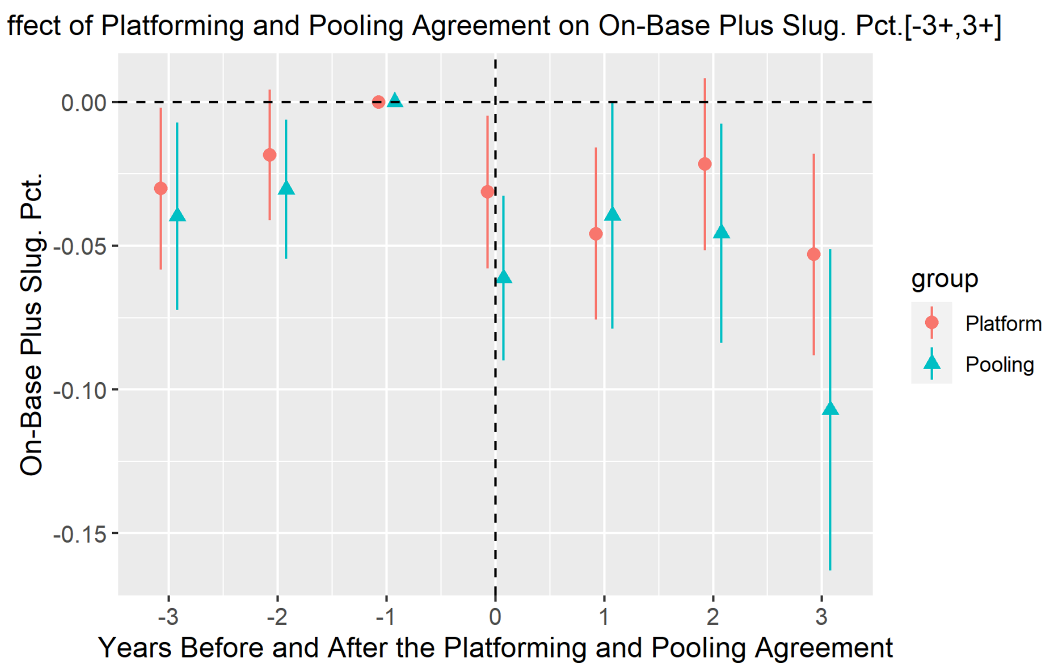

Figure IA.16: Dynamic Promotion Likelihood Surrounding Platforming and Pooling This figure shows the coefficient from a dynamic, annual OLS regression on a hitter's annual plate appearances surrounding his platforming and pooling dates.

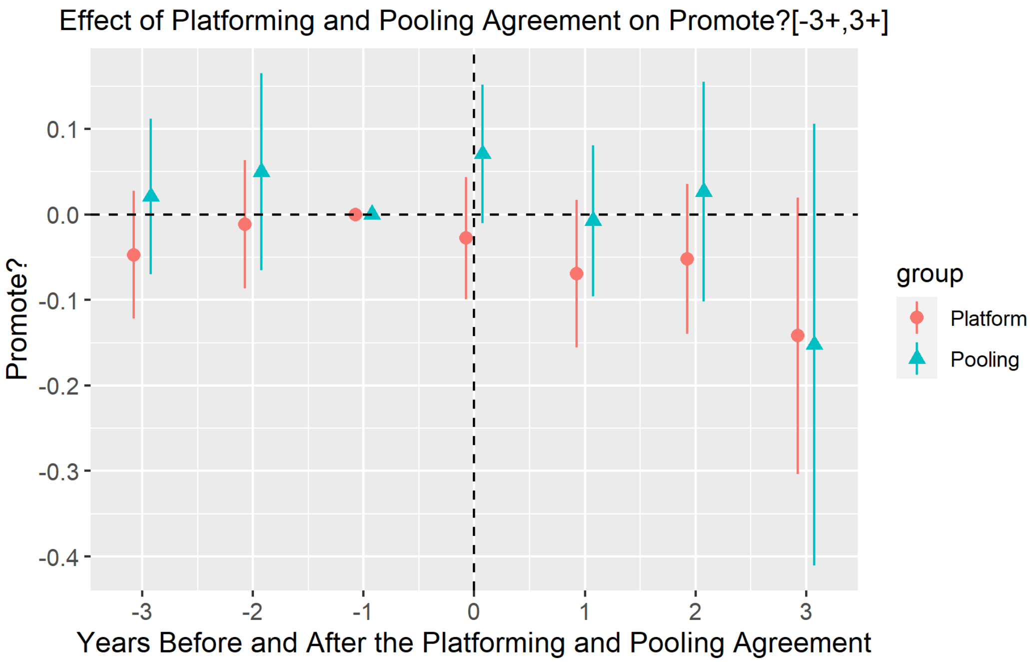

Figure IA.17: Dynamic ERA Surrounding Platforming and Pooling
This figure shows the coefficient from a dynamic, annual OLS regression on a pitcher's annual ERA surrounding his platforming and pooling dates.

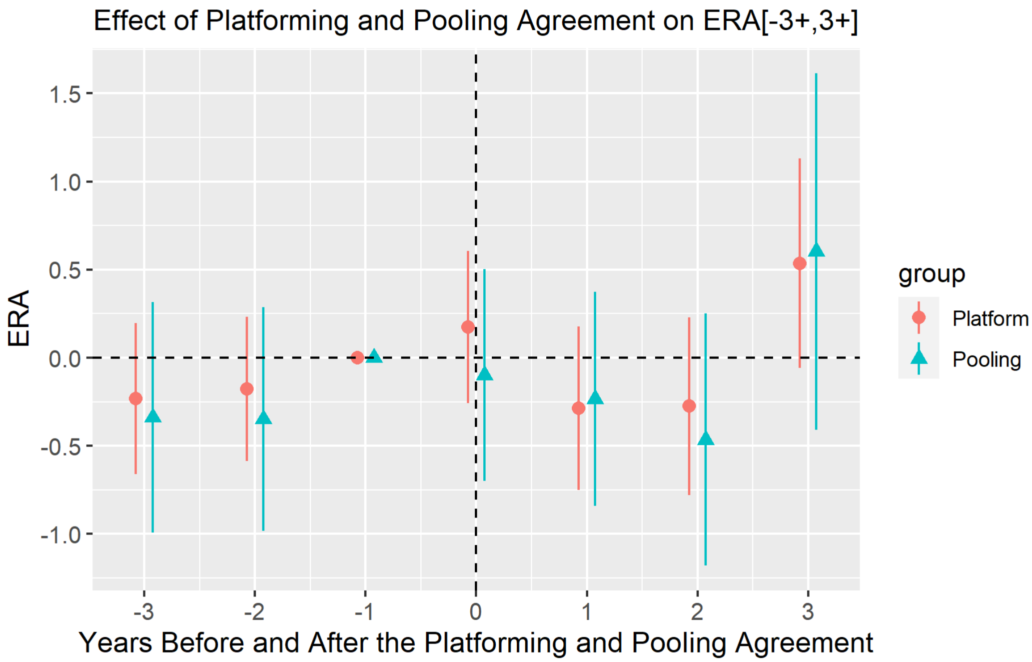

Figure IA.18: Dynamic Promotion Surrounding Platforming and Pooling
This figure shows the coefficient from a dynamic, annual OLS regression on a pitcher's annual promotion likelihood surrounding his platforming and pooling dates.

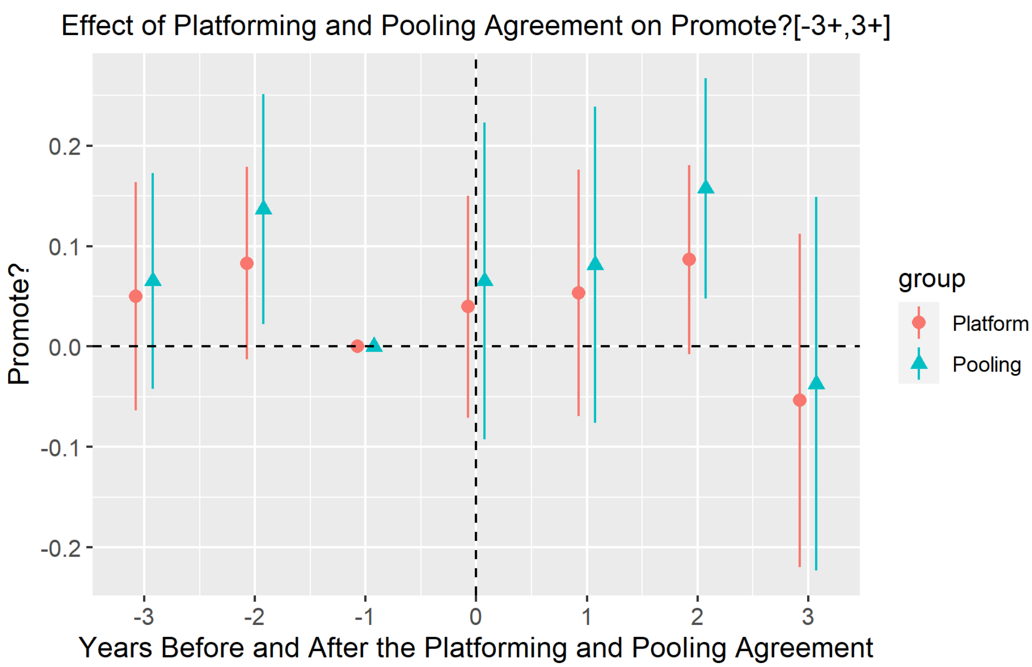

Table IA.1: Effect of Platforming on Performance

This table reports the OLS regression coefficients for regressing a minor league baseball player's platforming timing on his performance statistics. Panel A displays results for hitters and Panel B displays results for pitchers. Regressions include player, year, level, Major League affiliation, and player age fixed effects. Standard errors are additively clustered at the player and year levels. Players are included in the regression if their last year as a professional baseball player is after 2016 and they had not made the major leagues by the end of 2016.

	Panel A: Hitter Annual Performance							
	PA	R	SLG	BA	OBP	OPS	Promote?	Injury?
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Post × Platform	-131.46	-19.73	-0.10***	-0.06***	-0.04**	-0.13***	0.18	-0.31*
	[74.51]	[11.77]	[0.03]	[0.02]	[0.01]	[0.04]	[0.18]	[0.16]
Observations	28721	28721	28714	28714	28717	28714	28790	28790
R^2	-0.02	-0.02	-0.02	-0.02	-0.01	-0.02	-0.00	-0.01
Player F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Level F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Affiliation F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cluster S.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Y-Mean	231.15	28.33	0.36	0.24	0.33	0.68	0.23	0.20
Y-SD	146.52	19.35	0.09	0.05	0.05	0.12	0.42	0.40
Platform Mean	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Platform SD	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15
	Panel B: Pitcher Annual Performance							
	IP	K's	FIP	ERA	WHIP	K/BB	Promote?	Injury?
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Post × Platform	-5.10***	-5.55***	0.24***	0.17	0.03	-0.22***	-0.01	0.02
	[1.52]	[1.53]	[0.06]	[0.14]	[0.02]	[0.07]	[0.03]	[0.02]
Observations	32448	32448	32413	32413	32413	31818	33302	33302
R^2	0.68	0.66	0.46	0.39	0.44	0.51	0.43	0.38
Player F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Level F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Affiliation F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cluster S.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Y-Mean	46.40	44.35	0.64	4.33	1.44	2.64	0.28	0.20
Y-SD	33.04	30.20	1.24	2.05	0.36	1.35	0.45	0.40
Platform Mean	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Platform SD	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15

Table IA.2: Effect of Pooling on Performance

This table reports the OLS regression coefficients for regressing a minor league baseball player's pooling timing on his performance statistics. Panel A displays results for hitters and Panel B displays results for pitchers. Regressions include player, year, level, Major League affiliation, and player age fixed effects. Standard errors are additively clustered at the player and year levels. Players are included in the regression if their last year as a professional baseball player is after 2016 and they had not made the major leagues by the end of 2016.

Panel A: Hitter Annual Performance								
	PA	R	SLG	BA	OBP	OPS	Promote?	Injury?
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Post × Pool	-18.74**	-3.21***	-0.02***	-0.01**	-0.01**	-0.03***	0.01	0.01
	[6.82]	[0.87]	[0.01]	[0.00]	[0.00]	[0.01]	[0.03]	[0.03]
Observations	28721	28721	28714	28714	28717	28714	28790	28790
R^2	0.72	0.67	0.52	0.47	0.47	0.48	0.42	0.39
Player F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Level F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Affiliation F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cluster S.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Y-Mean	231.15	28.33	0.36	0.24	0.33	0.68	0.23	0.20
Y-SD	146.52	19.35	0.09	0.05	0.05	0.12	0.42	0.40
Live Mean	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Live SD	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11

Panel B: Pitcher Annual Performance								
	IP	K's	FIP	ERA	WHIP	K/BB	Promote?	Injury?
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Post × Pool	-4.17*	-4.62*	0.16*	0.11	0.01	-0.23**	0.01	0.02
	[1.98]	[2.15]	[0.08]	[0.17]	[0.02]	[0.10]	[0.04]	[0.02]
Observations	32448	32448	32413	32413	32413	31818	33302	33302
R^2	0.68	0.66	0.46	0.39	0.44	0.51	0.43	0.38
Player F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Level F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Affiliation F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cluster S.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Y-Mean	46.40	44.35	0.64	4.33	1.44	2.64	0.28	0.20
Y-SD	33.04	30.20	1.24	2.05	0.36	1.35	0.45	0.40
Pool Mean	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Pool SD	0.11	0.11	0.11	0.11	0.11	0.11	0.10	0.10

Table IA.3: Player Platform and Pooling Decision Instrumented

This table reports the OLS regression coefficients for regressing a minor league baseball player's decision to platform and pool on the lagged proportion of his peers from the same location or players within the same organization that have platformed. Location is defined within the same state for domestic players or same country for international players. Regressions include player, year, level, Major League affiliation, and player age fixed effects. Standard errors are additively clustered at the player and year levels. Players are included in the regression if their last year as a professional baseball player is after 2016 and they had not made the major leagues by the end of 2016.

	Platform?				Pool?			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Platform Location Instrument$_{t-1}$	0.80***	1.03***			0.44**	0.55***		
	[0.25]	[0.20]			[0.16]	[0.15]		
US Origin$_i$ × Platform Location Instrument$_{t-1}$		-0.82***				-0.40***		
		[0.22]				[0.08]		
Platform Affiliation Instrument$_{t-1}$			0.31	0.84**			0.34	0.64**
			[0.37]	[0.36]			[0.23]	[0.25]
US Origin$_i$ × Platform Affiliation Instrument$_{t-1}$				-1.00***				-0.57***
				[0.15]				[0.11]
Observations	62093	62074	62093	62074	62093	62074	62093	62074
R^2	0.60	0.61	0.60	0.60	0.59	0.59	0.59	0.59
Player F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Level F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Affiliation F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cluster S.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Y-Mean	0.02	0.02	0.02	0.02	0.01	0.01	0.01	0.01
Y-SD	0.15	0.15	0.15	0.15	0.10	0.10	0.10	0.10
Instrument Mean	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Instrument SD	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
F-Statistic	10.65		0.71		7.30		2.25	

Table IA.4: Exclusion Restriction: Location Shocks and MLB Short-term Performance
This table reports the coefficient estimates from a placebo test for regressing MLB player's performance (untreated players) on changes in the proportion of players platforming from the same location. The changes in the instrument are ranked into quartiles within each month × year. Panel A displays results for hitters and Panel B displays results for pitchers. Regressions include player, year, level, Major League affiliation, and player age fixed effects. Standard errors are additively clustered at the player and year levels. Players are included in the regression if their last year as a professional baseball player is after 2016 and they had not made the major leagues by the end of 2016.

	Panel A: Hitter Monthly Performance							
	PA	R	SLG	BA	OBP	OPS	Promote?	Injury?
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Location Quartile Shock	4.36	0.78*	0.00	-0.00	0.00	0.00	0.00	0.02
	[2.31]	[0.33]	[0.00]	[0.00]	[0.00]	[0.00]	[0.00]	[0.02]
Observations	1176	1176	1174	1174	1176	1174	1176	1176
R^2	0.85	0.83	0.57	0.54	0.54	0.54	1.00	0.48
Player F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Level F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Affiliation F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cluster S.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Y-Mean	319.48	41.18	0.41	0.25	0.33	0.75	0.68	0.41
Y-SD	167.79	22.95	0.08	0.04	0.04	0.11	0.47	0.49
X1-Mean	1.60	1.60	1.60	1.60	1.60	1.60	1.60	1.60
X1-SD	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
	Panel B: Pitcher Monthly Performance							
	IP	K's	FIP	ERA	WHIP	K/BB	Promote?	Injury
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	IP	K's	FIP	ERA	WHIP	K/BB	Promote?	Injury?
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Location Quartile Shock	1.05	1.09	-0.03	-0.08	-0.01	0.02	-0.00	-0.01
	[0.93]	[0.83]	[0.03]	[0.06]	[0.01]	[0.04]	[0.00]	[0.02]
Observations	1481	1481	1481	1481	1481	1359	1493	1493
R^2	0.80	0.80	0.51	0.49	0.51	0.57	1.00	0.49
Player F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Level F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Affiliation F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cluster S.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Y-Mean	62.67	62.88	0.91	4.29	1.35	2.97	0.72	0.42
Y-SD	37.45	34.17	[illegible]	1.62	0.27	1.18	0.45	0.49
X1-Mean	1.61	1.61	1.61	1.61	1.61	1.62	1.61	1.61
X1-SD	1.06	1.06	1.06	1.06	1.06	1.07	1.06	1.06

Table IA.5: Exclusion Restriction: Affiliation Shocks and MLB Short-term Performance
This table reports the coefficient estimates from a placebo test for regressing MLB player's performance (untreated players) on changes in the proportion of players platforming from the same Major League affiliates. The changes in the instrument are ranked into quartiles within each month × year. Panel A displays results for hitters and Panel B displays results for pitchers. Regressions include player, year, level, Major League affiliation, and player age fixed effects. Standard errors are additively clustered at the player and year levels. Players are included in the regression if their last year as a professional baseball player is after 2016 and they had not made the major leagues by the end of 2016.

	Panel A: Hitter Monthly Performance							
	PA	R	SLG	BA	OBP	OPS	Promote?	Injury?
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Affiliation Quartile Shock	-1.91	0.23	0.00	0.00	0.00	0.00	-0.00	-0.01
	[2.63]	[0.38]	[0.00]	[0.00]	[0.00]	[0.00]	[0.00]	[0.01]
Observations	1255	1255	1253	1253	1255	1253	1255	1255
R^2	0.86	0.84	0.59	0.54	0.55	0.56	1.00	0.49
Player F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Level F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Affiliation F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cluster S.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Y-Mean	319.43	41.34	0.42	0.25	0.33	0.75	0.67	0.41
Y-SD	167.65	23.00	0.08	0.04	0.04	0.11	0.47	0.49
X1-Mean	1.59	1.59	1.59	1.59	1.59	1.59	1.59	1.59
X1-SD	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11

	Panel B: Pitcher Monthly Performance							
	IP	K's	FIP	ERA	WHIP	K/BB	Promote?	Injury?
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Affiliation Quartile Shock	0.78	0.83	-0.06*	-0.09*	-0.01**	0.01	0.00	-0.01
	[0.65]	[0.61]	[0.02]	[0.04]	[0.01]	[0.03]	[0.00]	[0.01]
Observations	1598	1598	1598	1598	1598	1467	1615	1615
R^2	0.81	0.81	0.52	0.49	0.50	0.58	1.00	0.49
Player F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Level F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Affiliation F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cluster S.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Y-Mean	62.32	62.70	0.90	4.27	1.34	2.99	0.71	0.43
Y-SD	37.67	34.56	1.11	1.65	0.28	1.18	0.46	0.49
X1-Mean	1.64	1.64	1.64	1.64	1.64	1.65	1.64	1.64
X1-SD	1.14	1.14	1.14	1.14	1.14	1.15	1.14	1.14

Table IA.6: IV Effect of Pooling on Performance: Location Instrument

This table reports the IV regression coefficients for regressing a minor league baseball player's pooling timing on his performance. Panel A displays results for hitters and Panel B displays results for pitchers. Pooling timing is instrumented for by the lagged proportion of platformed players from a domestic player's home state or an international player's home country. Regressions include player, year, level, Major League affiliation, and player age fixed effects. Standard errors are additively clustered at the player and year levels. Players are included in the regression if their last year as a professional baseball player is after 2016 and they had not made the major leagues by the end of 2016.

Panel A: IV Hitter Annual Performance

	PA	R	SLG	BA	OBP	OPS	Promote?	Injury?
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Post × Platform	-131.46	-19.73	-0.10***	-0.06***	-0.04**	-0.13***	0.18	-0.31*
	[74.51]	[11.77]	[0.03]	[0.02]	[0.01]	[0.04]	[0.18]	[0.16]
Observations	28721	28721	28714	28714	28717	28714	28790	28790
R^2	-0.02	-0.02	-0.02	-0.02	-0.01	-0.02	-0.00	-0.01
Player F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Level F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Affiliation F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cluster S.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Instrument	Loc.	Loc.	Loc.	Loc.	Loc.	Loc.	Loc.	Loc.
F-statistic	14.43	14.43	14.40	14.40	14.42	14.40	13.96	13.96
Y-Mean	231.15	28.33	0.36	0.24	0.33	0.68	0.23	0.20
Y-SD	146.52	19.35	0.09	0.05	0.05	0.12	0.42	0.40
Platform Mean	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Platform SD	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15

Panel B: IV Pitcher Annual Performance

	IP	K's	FIP	ERA	WHIP	K/BB	Promote?	Injury?
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Post × Platform	-44.79*	-40.03*	-0.24	0.87	0.05	-0.01	-0.40	0.06
	[20.49]	[21.00]	[0.61]	[1.05]	[0.16]	[0.48]	[0.26]	[0.17]
Observations	32436	32436	32401	32401	32401	31810	33290	33290
R^2	-0.04	-0.03	-0.00	-0.00	0.00	0.00	-0.01	-0.00
Player F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Level F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Affiliation F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cluster S.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Instrument	Loc.	Loc.	Loc.	Loc.	Loc.	Loc.	Loc.	Loc.
F-Statistic	6.87	6.87	6.84	6.84	6.84	6.66	7.24	7.24
Y-Mean	46.40	44.35	0.64	4.33	1.44	2.64	0.28	0.20
Y-SD	33.04	30.20	1.24	2.05	0.36	1.35	0.45	0.40
Platform Mean	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Platform SD	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15

Table IA.7: IV Effect of Pooling on Performance: Affiliation Instrument

This table reports the IV regression coefficients for regressing a minor league baseball player's pooling timing on his performance. Panel A displays results for hitters and Panel B displays results for pitchers. Pooling timing is instrumented for by the lagged proportion of platformed players from a player's Major League affiliate. Regressions include player, year, level, Major League affiliation, and player age fixed effects. Standard errors are additively clustered at the player and year levels. Players are included in the regression if their last year as a professional baseball player is after 2016 and they had not made the major leagues by the end of 2016.

	Panel A: IV Hitter Annual Performance							
	PA	R	SLG	BA	OBP	OPS	Promote?	Injury?
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Post × Pool	-280.06	-42.05	-0.21**	-0.12**	-0.08**	-0.29**	0.38	-0.66
	[167.79]	[26.10]	[0.07]	[0.04]	[0.03]	[0.10]	[0.42]	[0.39]
Observations	28712	28712	28705	28705	28708	28705	28781	28781
R^2	-0.05	-0.06	-0.05	-0.05	-0.02	-0.04	-0.01	-0.02
Player F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Level F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Affiliation F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cluster S.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Instrument	Loc.	Loc.	Loc.	Loc.	Loc.	Loc.	Loc.	Loc.
F-statistic	7.23	7.23	7.22	7.22	7.23	7.22	7.26	7.26
Y-Mean	231.15	28.33	0.36	0.24	0.33	0.68	0.23	0.20
Y-SD	146.51	19.35	0.09	0.05	0.05	0.12	0.42	0.40
Live Mean	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Live SD	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11

	Panel B: IV Pitcher Annual Performance							
	IP	K's	FIP	ERA	WHIP	K/BB	Promote?	Injury?
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Post × Pool	-69.91*	-62.48*	-0.38	1.35	0.07	-0.02	-0.65	0.10
	[31.47]	[32.09]	[0.95]	[1.66]	[0.26]	[0.74]	[0.43]	[0.29]
Observations	32436	32436	32401	32401	32401	31810	33290	33290
R^2	-0.06	-0.05	-0.00	-0.00	-0.00	0.00	-0.02	-0.00
Player F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Level F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Affiliation F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cluster S.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Instrument	Loc.	Loc.	Loc.	Loc.	Loc.	Loc.	Loc.	Loc.
F-Statistic	6.05	6.05	6.03	6.03	6.03	5.89	5.98	5.98
Y-Mean	46.40	44.35	0.64	4.33	1.44	2.64	0.28	0.20
Y-SD	33.04	30.20	1.24	2.05	0.36	1.35	0.45	0.40
Live Mean	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Live SD	0.11	0.11	0.11	0.11	0.11	0.11	0.10	0.10

Table IA.8: Determinants of Platforming Decision

This table reports the OLS regression coefficients for regressing a player's decision to platform at time t on his prior month pitching and hitting statistics. Regressions include player, year, level, Major League affiliation, and player age fixed effects. Standard errors are additively clustered at the player and year levels. Players are included in the regression if their last year as a professional baseball player is after 2016 and they had not made the major leagues by the end of 2016.

	Platform?							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
PA_{t-1}	0.00							
	[0.00]							
On-Base % Plus Slugging_{t-1}		0.42						
		[0.69]						
Promotion_{t-1}			0.29				-0.12	
			[0.19]				[0.19]	
Injury_{t-1}				0.06				0.12
				[0.09]				[0.10]
Inning Pitched_{t-1}					0.00			
					[0.00]			
ERA_{t-1}						0.03		
						[0.04]		
Observations	19095	19092	19110	19110	21391	21383	22029	22029
R^2	0.39	0.39	0.39	0.39	0.39	0.39	0.38	0.38
Player F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Level F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Affiliation F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cluster S.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Y-Mean	0.98	0.98	0.98	0.98	0.92	0.92	0.91	0.91
Y-SD	9.87	9.87	9.87	9.87	9.55	9.55	9.51	9.51
X1-Mean	275.76	0.70	0.27	0.26	55.53	3.98	0.32	0.25
X1-SD	144.71	0.11	0.44	0.54	34.61	1.64	0.47	0.53

Table IA.9: Determinants of Pooling Decision

This table reports the OLS regression coefficients for regressing a player's decision to pool at time t on his prior month pitching and hitting statistics. Regressions include player, year, level, Major League affiliation, and player age fixed effects. Standard errors are additively clustered at the player and year levels. Players are included in the regression if their last year as a professional baseball player is after 2016 and they had not made the major leagues by the end of 2016.

	Pool?							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
PA_{t-1}	-0.00							
	[0.00]							
On-Base % Plus Slugging_{t-1}		0.17						
		[0.45]						
Promotion_{t-1}			0.07				-0.02	
			[0.13]				[0.16]	
Injury_{t-1}				0.02				-0.02
				[0.07]				[0.06]
Inning Pitched_{t-1}					0.00*			
					[0.00]			
ERA_{t-1}						0.03		
						[0.03]		
Observations	19295	19292	19310	19310	21612	21604	22255	22255
R^2	0.39	0.39	0.39	0.39	0.38	0.38	0.38	0.38
Player F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Level F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Affiliation F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cluster S.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Y-Mean	0.44	0.44	0.44	0.44	0.46	0.46	0.46	0.46
Y-SD	6.62	6.62	6.62	6.62	6.79	6.79	6.75	6.75
X1-Mean	275.82	0.70	0.27	0.26	55.48	3.98	0.32	0.25
X1-SD	144.68	0.11	0.45	0.54	34.58	1.64	0.47	0.53

Table IA.10: Player Longevity Surrounding Pooling

This table reports the OLS regression coefficients for regressing a player's longevity on his platforming and pooling choice and timing. *Final month* indicates a player's final month within minor league baseball. Regressions include player, year, level, Major League affiliation, and player age fixed effects. Standard errors are additively clustered at the player and year levels. The sample includes player × month observations through the end of 2022. Players are included in the regression if their last year as a professional baseball player is after 2016 and they had not made the major leagues by the end of 2016.

	Final Year?							
	Platform				Pooling			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Join Platform	-0.06***							
	[0.01]							
Post Platform		-0.01	-0.22	-0.63				
		[0.02]	[0.14]	[0.94]				
Join Pool					-0.06***			
					[0.00]			
US Origin					0.03*			
					[0.01]			
Post Pool						-0.00	-0.41	-0.48
						[0.02]	[0.26]	[0.55]
Observations	61126	57354	57354	57354	61083	57354	57354	57354
R^2	0.06	0.10	-0.00	-0.02	0.06	0.10	-0.00	-0.01
Player F.E.	No	Yes	Yes	Yes	No	Yes	Yes	Yes
Year F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Level F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Affiliation F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Age F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Sample	<= 2022	<= 2022	<= 2022	<= 2022	<= 2022	<= 2022	<= 2022	<= 2022
Cluster S.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Y-Mean	0.29	0.25	0.25	0.25	0.29	0.25	0.25	0.25
Y-SD	0.45	0.43	0.43	0.43	0.45	0.43	0.43	0.43
X1-Mean	0.05	0.00	0.00	0.00	0.02	0.00	0.00	0.00
X1-SD	0.22	0.00	0.00	0.00	0.16	0.00	0.00	0.00

Table IA.11: Covariance of Performance: Aggregate Pool Monthly

This table reports the OLS regression coefficients for regressing a player's individual performance on the pool's aggregate performance excluding the individual player. All players are included in the sample are included in the regression with non-poolers' Pool OPS and pool ERA set to the level of all non-poolers. Regressions include player, year, level, Major League affiliation, and player age fixed effects. Standard errors are additively clustered at the player and year levels. Players are included in the regression if their last year as a professional baseball player is after 2016 and they had not made the major leagues by the end of 2016.

	Individual OPS		Individual ERA	
	(1)	(2)	(3)	(4)
Pool OPS	0.37***	0.32***		
	[0.06]	[0.09]		
Post Pool	-0.02**		0.06	
	[0.01]		[0.28]	
Post Pool		-0.08		0.14
		[0.08]		[0.48]
Post Pool × Pool OPS		0.09		
		[0.10]		
Pool ERA			-0.21**	-0.20
			[0.09]	[0.15]
Post Pool × Pool ERA				-0.02
				[0.09]
Observations	43380	43380	32228	32228
R^2	0.44	0.44	0.37	0.37
Player F.E.	Yes	Yes	Yes	Yes
Year F.E.	Yes	Yes	Yes	Yes
Pool F.E.	Yes	Yes	Yes	Yes
Cluster S.E.	Yes	Yes	Yes	Yes
Y-Mean	0.68	0.68	4.57	4.57
Y-SD	0.14	0.14	2.95	2.95
X1-Mean	0.71	0.71	4.17	4.17
X1-SD	0.02	0.02	0.49	0.49

Table IA.12: Covariance of Performance: Aggregate Pool Monthly

This table reports the OLS regression coefficients for regressing a player's individual performance on another player's performance. Only pooling players are included in the regression with identifying variation stemming from whether players are in the same pool and whether the performance measure is from before or after their pooling. Regressions include player, year, level, Major League affiliation, and player age fixed effects. Standard errors are additively clustered at the player and year levels. Players are included in the regression if their last year as a professional baseball player is after 2016 and they had not made the major leagues by the end of 2016.

	Scaled OPS			Scaled ERA		
	(1)	(2)	(3)	(4)	(5)	(6)
Scaled OPS	-0.01***	-0.00***	-0.01***			
	[0.00]	[0.00]	[0.00]			
Same Pool	0.05***	0.04***	0.10**	-0.01	-0.01	-0.00
	[0.01]	[0.01]	[0.03]	[0.01]	[0.01]	[0.02]
Post Both Pool	-0.08***		-0.08**	0.01		0.01
	[0.03]		[0.03]	[0.03]		[0.03]
Same Pool × Scaled OPS		0.01	-0.02			
		[0.02]	[0.02]			
Post Both Pool × Scaled OPS			0.00			
			[0.00]			
Same Pool × Post Both Pool			-0.12**			-0.02
			[0.06]			[0.04]
Same Pool × Post Both Pool × Scaled OPS			0.01			
			[0.05]			
Scaled ERA				-0.00***	0.02***	-0.00***
				[0.00]	[0.01]	[0.00]
Same Pool × Scaled ERA					0.03	0.06**
					[0.02]	[0.02]
Post Both Pool × Scaled ERA						-0.01***
						[0.00]
Same Pool × Post Both Pool × Scaled ERA						-0.06
						[0.04]
Observations	371381	371381	371381	400778	400778	400778
R^2	0.46	0.46	0.46	0.30	0.28	0.30
Player 1 F.E.	Yes	Yes	Yes	Yes	Yes	Yes
Player 2 F.E.	Yes	Yes	Yes	Yes	Yes	Yes
Year F.E.	Yes	Yes	Yes	Yes	Yes	Yes
Pool F.E.	Yes	Yes	Yes	Yes	Yes	Yes
Cluster S.E.	Yes	Yes	Yes	Yes	Yes	Yes
Y-Mean	0.09	0.09	0.09	-0.08	-0.08	-0.08
Y-SD	0.88	0.88	0.88	0.66	0.66	0.66
X1-Mean	0.11	0.11	0.11	-0.08	-0.08	-0.08
X1-SD	0.88	0.88	0.88	0.66	0.66	0.66